HOW TO TEACH SPELLING

BREED

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BY

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FOREWORD

As a subject of experimental and statistical investigation, spelling has an undeniable fascination. By its very nature it lends the investigator a peculiar coöperation. The possibility of exact quantitative results, if nothing else, explains much of this fascination and appeal. Moreover, the conviction is hard to escape that a subject of this character can blaze pathways of progress for less fortunate branches of study. In the field of curriculum construction, for example, it seems indubitably true that advances in spelling have great suggestive value for other subjects.

The purpose of this book is to select the fundamental problems that arise in the teaching and supervision of spelling and to indicate the solutions that are provided by scientific studies. The problems are treated in the order in which they confront the school worker in a constructive program. An attempt has been made to keep in mind at every step both the problems of the school and the results of research. References to the important literature are given in connection with the treatment of each problem and are assembled in the bibliography at the end of the book. The aim, in a word, has been

to envisage the whole subject of spelling, select the major problems, and treat these constructively in the light of objective investigations.

Much of the material of the book has previously appeared in articles contributed to educational journals. Chapter II was published, essentially in its present form, in *School and Society*. The content of Chapter VIII, with the exception of the vocabulary, which now appears for the first time in print, was published in the *Elementary School Journal*. The remaining chapters represent a revision and enlargement of a series of articles written for *Normal Instructor and Primary Plans*. These articles, forming the core of the book, were prepared from the first with the book in mind.

The indebtedness of the author is too intricate and manifold for specification in detail. To numerous graduate students much credit is due for the energy and accuracy with which they have cooperated in the study of selected problems. Their names have not often enough been mentioned in the pages that follow. To Professor Charles H. Judd and Professor Franklin Bobbitt the author is much indebted for helpful criticism of his manuscript. Finally, to a host of devoted builders of the science of education, the author's debt of gratitude is large and incalculable. On the product of their labors he rears his modest edifice, knowing too well that the progress of science will shortly make his structure in a measure inadequate, whatever its present adequacy.

F. S. B.

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CHAPTER I

SELECTING THE WORDS TO BE TAUGHT

At the outset of this discussion of problems in the teaching of spelling the query naturally arises, What are the major problems which teachers and supervisors confront in this subject? The answer to this question may vary somewhat with the individuals who make the reply. Nevertheless it is quite apparent to one who surveys the literature in the field that the disagreement of authorities on this point is neither extensive nor significant. If one fancies himself in the position of an educational worker who has the job of constructing a course of study in spelling and of outlining the instructional procedures that are to accompany it, he can easily envisage the following as the fundamental tasks with which he will have to deal: (1) selecting the words to be taught, (2) grading the words, (3) organizing the lesson units, (4) directing the study activities, (5) handling cases of spelling disability, and (6) measuring the results of instruction. In the ensuing pages these will be regarded as the major problems to which our attention should be devoted.

The writer is aware that classroom teachers are not equally interested in all the topics mentioned above. For example, they are much more interested

in methods of teaching than they are in methods of determining the spelling vocabulary. There are distinct indications, however, that their interest is spreading to the vocabulary problem. Too long have teachers relied upon a study of method alone for their pedagogical salvation. They are now beginning to see that many of their teaching troubles have their origin not in the *how* of instruction, but in the *what*. Not uncommonly do they feel that they are teaching words that ought not to be taught and failing to teach words that ought to be taught. Such skepticism on the part of classroom teachers in regard to the course of study is a highly wholesome and promising symptom. It shows that they are on the way to become students of the curriculum, that they are ready to join the increasing army of progressive teachers who are demanding scientific curriculum reorganization in our schools.

Scientific Revision of the Curriculum

This movement for the reorganization of our courses of study on a more scientific basis has already reached tremendous proportions. No movement in education is attracting more attention at the present moment. Curriculum experts and committees in scores of cities are vigorously attacking the problem, with results that are bound to be far-reaching. In spelling, superintendents will be compelled to reëxamine their word lists and check their textbooks in the light of new discoveries; publishers will be less inclined to publish spellers with an inadequate scientific foundation; and teachers

will become more sensitive to the finer adjustments of curriculum materials to the present and future needs of the child.

Nor is this all. The new orientation which teachers will secure from a comprehension of the principles of modern curriculum-making will enable them to avoid certain types of error. In a recent survey under the direction of the writer, a teacher was found drilling her grade vigorously on a list of words that had a flavor peculiarly strange and unusual. Such words as *Minotaur* and *Theseus* were seriously included, with others of their kind. Upon inquiry it was discovered that these words had been encountered in a project. To some this would be sufficient justification for their adoption in the spelling course. A little reflection, however, convinces one that the accidents of project teaching ought not to determine the words that children should learn to spell. Aside from all questions of method, project or otherwise, these words must be selected on the basis of scientific principles.

One may now ask, What is the proper method of selecting the words to be taught in spelling? So far as the groundwork for this task is concerned, it should be noted that spelling is in a rather fortunate position, for there are more scientific investigations relating to the material in spelling than to the material in any other subject. To date, no less than thirty or forty investigations have been made, a majority of which help to provide an answer to the vocabulary problem. They supply objectively derived word lists from which the spelling vocabulary may be selected. Investigators have forsaken

the old-time subjective method, in accordance with which an educator nominated himself an expert and proceeded to set down, largely on the basis of mere opinion, a list of words supposed to represent the spelling needs of children.

The Major Objective in Teaching Spelling

Modern investigators begin their work with a clear conception of the major purpose in the teaching of spelling. They see clearly that the purpose of spelling instruction is to enable children and adults to write correctly the words which they employ in their written discourse. Therefore, the vocabulary question at this stage takes the form: What are the words that children and adults need most in their written discourse? That is, what are the words that they need in themes and letters, notes and memoranda, minutes and reports—all the important forms of written discourse in general use?

One may easily realize at this point why it is that studies dealing with the vocabulary of newspapers and books are no longer being employed by leading curriculum-makers in spelling. Although these printed materials are classifiable as written discourse, they are the product of a small element of the population, of specialists in the writing profession, and therefore cannot be accepted as representative of common needs. Of the various forms of written discourse in general use, themes and letters are relied on most, because of their prevalence in school and in life.

It is now easy to understand why investigators have painstakingly tabulated literally millions of running words from the two sources last mentioned. They are finding out what words should be taught in spelling by finding out what words children and adults actually use when they write. These words they tabulate, with the frequency of occurrence of each, thus enabling us to select the most important.

Child Needs versus Adult Needs

The next question that confronts the maker of a spelling list goes to the very foundation of curriculum-making: Shall the writing usage of children or that of adults, or both, be used as the basis for the vocabulary?[1] Experts are divided on the problem. Jones's list,[2] which has been much utilized in the preparation of spelling courses, is an example of the first type; Andersen's list,[3] of the second. When one considers that the Jones and Andersen lists have each been used as the exclusive basis for the vocabulary of spelling texts, one senses more fully not only the antagonism of opposing theories, but also the import of this antagonism in the practical work of the schools.

It is no mere accident that some of our workers have gone consistently to the writing of children

[1] Frederick S. Breed, "The Words to Be Taught in Spelling," *Elementary English Review*, IV (1927), 97–101.

[2] *Concrete Investigation of the Material of English Spelling with Conclusions Bearing on the Problems of Teaching Spelling.* Vermilion, South Dakota: University of South Dakota, 1914.

[3] *Determination of a Spelling Vocabulary Based upon Written Correspondence.* University of Iowa Studies in Education, Vol. II, No. 1. Iowa City, Iowa: University of Iowa, 1921.

for spelling material, while others have gone just as consistently to the writing of adults. Back of this difference in method is a difference in educational theory. This conflict of theory is not limited to the subject of spelling. It is a conflict that arises everywhere in curriculum-making. As a result of this divergence in viewpoint, curriculum-makers may be classified into two fairly distinct schools, which may be designated as the psychological and the sociological.[4]

When the first great wave of interest in curriculum construction spread over the country a few years ago, the sociological point of view was dinned into our ears so insistently that we almost lost our educational balance and perspective. The old notion of education as "preparation for life" was exhumed, dusted off, and dressed up so attractively that we almost came to believe that a miracle of reincarnation was taking place before our very eyes. Analysis of adult activity, which in the case of spelling meant analysis of the writing of adults, was to become the sole source of curriculum materials, so the

[4] By the "psychological" school is meant the group of curriculum-makers who derive their materials entirely from the activities of children; by the "sociological" school, the group who derive their materials entirely from the activities of adults. The terms used may not be the best by which to characterize these two schools. If the reader prefers to regard both methods as sociological, on the ground that social activities are used as a basis in both cases, the writer would offer no objection. This difference in terms, however, makes no difference in the dispute. In the altered terminology the problem remains the same: Shall the curriculum be based entirely on materials employed at the level of complete social maturity or shall the levels of incomplete maturity also be recognized? Since recognition of lower levels means a closer adjustment to the needs and interests of children, this procedure is obviously *more* psychological, and on this account, for want of a more appropriate term, it may be so designated.

extremists of the sociological school informed us. Things and activities in which children exclusively were interested, or the words referring to them, were not to influence the construction of the course of study in the modern school. Thanks, however, to a sanity born of more mature reflection and a more careful study of the facts, childhood is coming into its own again. Only a few irreconcilables still demand that the school of Rousseau, Hall, and Dewey should apologize for its existence.

In defense of their position, the sociological extremists contend: (1) that there is no appreciable difference between the word usage of children and that of adults, and (2) that even if there were a difference, it should not be recognized in word selection. Neither of these contentions seems valid.[5] The point involved in the first is a question of fact; that in the second is a matter of educational theory, and will so remain until elaborate experiments have determined the relative economy of the two different educational procedures, experiments that at best will be difficult to perform.

A Comparison Based on Objective Evidence

To throw some light on the first contention, a comparison[6] was made of two composite word lists, one compiled by Professor Ernest Horn, containing

[5] Frederick S. Breed, "Limitations of the Social Principle in Making a Curriculum," *Chicago Schools Journal*, IX (1926), 325–27.

[6] Frederick S. Breed, "What Words Should Children Be Taught to Spell? III. Limitations of the Adult Standard of Selection," *Elementary School Journal*, XXVI (1925), 292–306.

all the words found in eleven investigations[7] of adult correspondence, the other, compiled by the writer, containing all the words in five investigations[8] of children's themes. In the adult list there were 9,057 different words; in the childhood list, 7,035. The comparison showed that 4,598 words were common to the two lists; that 2,437 of the childhood

[7] These eleven investigations comprise the following:

a) William Niclaus Andersen, *op. cit.*

b) L. P. Ayres, *The Spelling Vocabularies of Personal and Business Letters.* New York: Russell Sage Foundation, 1913.

c) W. F. Clarke, "Writing Vocabularies," *Elementary School Journal,* XXI (1921), 349–51.

d) W. A. Cook and M. V. O'Shea, *The Child and His Spelling,* pp. 157–219. Indianapolis: Bobbs–Merrill Co., 1914.

e) Ernest Horn, "The Vocabulary of Highly Personal Letters." Unpublished study, University of Iowa, 1922.

f) Ernest Horn, "The Vocabulary of Bankers' Letters," *English Journal,* XII (1923), 283–97.

g) J. David Houser, "An Investigation of the Writing Vocabularies of Representatives of an Economic Class," *Elementary School Journal,* XVII (1917), 708–18.

h) "Dr. Frederic Burk's List from Ninety-one Friends' Letters," *A Speller for the Use of the Teachers of California,* pp. 195–99. Compiled by Anne Nicholson. Sacramento, California: State Board of Education, 1914.

i) "List Compiled from the Business Correspondence of The Emporium, San Francisco, and Hale's Department Store, San José," *ibid.,* pp. 210–17.

j) "List Compiled from the Correspondence of the California Barrel Co.," *ibid.,* pp. 205–9.

k) "List Compiled from the Social Correspondence of the Members of the Parents' Association, Normal Training School, San José," *ibid.,* pp. 200–204.

[8] These five investigations comprise the following:

a) Nicholas Bauer, *The Writing Vocabulary of Pupils of the New Orleans Public Schools.* New Orleans: Department of Superintendence, 1915.

b) W. Franklin Jones, *op. cit.*

c) H. J. Smith, "Spelling Vocabularies of Children in the Elementary School." Unpublished study, University of Wisconsin, 1913.

d) C. K. Studley and Allison Ware, "List of Words Based upon the Compositions of Children." Unpublished study, State Normal School, Chico, California, 1917.

e) W. F. Tidyman, *Survey of the Writing Vocabularies of Public School Children in Connecticut.* Teacher's Leaflet No. 15. Washington: Bureau of Education, 1921.

words were not found in the adult list, and that 4,459 words used by adults were not reported in the vocabulary of children. When the larger of the two lists was reduced to the size of the smaller by the elimination of the words of lowest frequency, and the two were compared, it was found that there was an identity of only 59.7 per cent. This suggests that, using the best investigations at their disposal, curriculum-makers of the two opposing camps may arrive at materially different word lists for spelling purposes.

TABLE I. ANALYSIS OF WORDS USED BY CHILDREN ONLY

Category	Number of Words
School	576
Stories	465
Home	358
Conduct	229
Animals	188
Play	134
Food	106
Farm	70
Plants	68
Health	54
Clothing	44
Miscellaneous	145
Total	2,437

Let us pursue the problem a step further. It may be suggested that the 40.3 per cent difference found above is accidental, a result of what statisticians call the "error of sampling." If it should be found that the words used by children only are of the same general types as those used by adults only, there

would be some ground for this argument. If, however, it should be found that the distinctive portions of the two vocabularies are composed of different types of words, it would be more difficult to support the view that word usage is the same in the two cases.

Table I shows the kinds of words found only in the vocabulary of children.

Table II shows a similar classification of words found only in the vocabulary of adults.

TABLE II. ANALYSIS OF WORDS USED BY ADULTS ONLY

Category	Number of Words
Derivatives of words common to both lists	1,791
Words of general application:	
Abstract nouns	310
Qualifying words	492
Verbs	374
Words of special application:	
Business and professional	710
Social and political	329
Domestic and recreational	321
Religious	41
Miscellaneous	91
Total	4,459

It will be observed that, aside from the derivatives[9] of words common to the two composite lists, there are two major groups of words in Table II. These are (1) words of general application and (2) words of special application. The first group is made up of abstract nouns, adjectives, and verbs; the second,

[9] Fifty-seven different derivative endings were considered.

of words of the following types: business and professional, social and political, domestic and recreational, and religious. The difference between the childhood and adult words, the reader will observe, is very marked. The two sets of categories are almost wholly different; and, after all, is this not consonant with common sense? Children and adults use many words in common, but it is evident that there is a distinctive element in the vocabulary of each. On the side of the child, this distinctive element consists of words referring to school and home, stories and adventure, animals and plants, conduct and play, food, health, and clothing; while, on the side of the adult, it consists of words of general and special application acquired only after a certain degree of maturity of mind and expansion of interests. In fact, it seems clear, in the light of this study, not only that there is a real difference between the writing vocabulary of children and that of adults, but also that this difference is the result of a difference in psychological maturity. As we become old we put away childish things and reach for others more in keeping with our years. In the correspondence of adults, *tiger, elephant, giant, Indian, kite,* and *sled* received no notice, but they appeared in every one of the five childhood vocabularies. On the other hand, *candidacy, delegation, agency, capitalization, formula, editorial, garment, homestead,* and the like, used by the adults, occurred in none of the vocabularies of children. The childhood list consists, to a large extent, of words denoting concrete things and the activities associated with them, such as *rooster, crowed; pansy, bloomed;* and the like.

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A Rational Combination of the Two Methods

Since there is quite clearly a real difference between the word usage of children and that of adults, it is evident that strict adherence to the sociological principle of vocabulary derivation will have as its result (1) depriving the child of many words that belong at his psychological level, and (2) supplying him with many words beyond his psychological level.

The defenders of the sociological principle argue energetically that the curriculum should be constructed on the basis of permanent values, not temporary ones. They subordinate the interests of childhood to those of adult life. As was suggested earlier, education, to them, is to be regarded as preparation for life, not life itself. To them the standards of maturity are the standards for every level of immaturity. They confuse ultimate objectives with the stages by which the objectives are attained. They fail to realize that there are various levels of maturity and that the training at any level must be appropriate for the needs of that level.[10]

For a hundred years we have been making vast progress toward the emancipation of childhood. This progress will not be interrupted for long by the reactionary view under discussion. On the contrary, there is every indication that the nature of the child and the needs of the adult will each play a part in the selection of the materials of instruction. One of the best indications of the present trend is

[10] Franklin Bobbitt, "The New Technique of Curriculum-Making," *Elementary School Journal*, XXV (1924), 45–54.

found in the composite statement of the Committee on Curriculum-Making of the National Society for the Study of Education, from which the following is taken:

> We would stress the principle that in the selection and validation of curriculum materials expert analysis must be made both of the activities of adults and of the activities and interests of children. The data from adult life go far to determine what is of permanent value; the data from child life go far to determine what is appropriate for education in each stage of the child's development.[11]

In the construction of a spelling vocabulary[12] for public-school use, the writer has proceeded on the following assumptions: (1) that the most important constituent of the minimal spelling vocabulary is a list of words of high frequency in the written discourse of both children and adults; (2) that words of unusually high frequency in the usage of children should be included in the minimal list, regardless of adult usage; (3) that words of unusually high frequency in the usage of adults should be included in the minimal list, regardless of the usage of children, but that care should be taken to allocate these words to the seventh and eighth grades. It may be remarked that the common element constitutes by far the largest portion of this vocabulary, totaling 3,030 words, or about 85 per cent of the complete list.

The size of the vocabulary is determined by data such as those in the following table.

[11] *The Foundations of Curriculum-Making*, p. 13. Prepared by the Society's committee under the direction of Harold Rugg. Twenty-sixth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1926.

[12] See Chapter VIII.

TABLE III. CONTRIBUTION OF THE MOST USED WORDS TO THE TOTAL NUMBER OF RUNNING WORDS

Different Words in Order of Frequency	Percentage of Total Number of Words Tabulated
100	58.83
500	82.05
1,000	89.61
1,500	93.24
2,000	95.38
2,500	96.76
3,000	97.66
3,500	98.30
4,000	98.73
4,500	99.00
5,000	99.20
5,500	99.33
6,000	99.46
6,500	99.53

These data are reported by Horn,[13] and represent a tabulation of approximately 1,000,000 running words in the correspondence of adults. The table should be read as follows: The 100 words of highest frequency make up 58.83 per cent of the words one needs in writing, the 500 words of highest frequency make up 82.05 per cent, and so on. One may observe that 3,500 words contribute, with their repetitions, 98.3 per cent of the 1,000,000; 4,000 words, 98.73 per cent; and that 1,000 words beyond 4,000 increase the preceding percentage less than one-half of 1 per cent. In other words, one clearly encounters here the law of diminishing returns. These data lead

[13] "The Curriculum for the Gifted: Some Principles and an Illustration," *Report of the Society's Committee on the Education of Gifted Children*, p. 87. Twenty-third Yearbook of the National Society for the Study of Education, Part I. Bloomington, Illinois: Public School Publishing Co., 1924.

to the conclusion that it would be uneconomical to attempt to teach thoroughly more than 3,500 to 4,000 words. With this number the schools can anticipate between 98 and 99 per cent of the running words which the child will be called upon to write. The remaining 1 to 2 per cent, composed of a large number of words infrequently used, could not be covered even if the list were extended to a total of 10,000. The child will be expected, therefore, to supplement the minimal list at intervals all through life, on the theory that it is more economical for him to do this than to attempt to learn in school the enormous number of words infrequently used.

CHAPTER II

THE CURRICULUM AND THE CHILD: A CRITICISM AND A REPLY

The spotlight of educational interest is now sharply focused on the problems of the curriculum. Illumination for the task of analysis and reconstruction which lies ahead is being furnished by a group of gifted educational thinkers who are succeeding admirably in translating a vague social philosophy into a definite social practice. We have caught the social vision of this group and are putting their techniques into the service of curriculum-making as rapidly as inventive genius can provide them. A mass attack on a set of problems as baffling and complex as those of the curriculum is bound to lead to much confusion, no little disagreement regarding ways and means, no small amount of error and wasted effort. There are many educators, however, who, in spite of the defection in certain localities, still believe in the biologic law of survival values, and apply it as rigidly to scientific truths as to organic structures. To them there seems much reason for optimism in the present situation. It is their faith that, after the dust of discord has drifted away, after the tumult and the shouting dies, the relative workability of rival theories and techniques will surely be less dimly perceived.

A New Plan of Curriculum-Making in Spelling

Leaders in the field of spelling have adopted the prevailing social outlook on curriculum problems and are now wrestling with the question of techniques for putting this social philosophy into practice. The subject of spelling, as earlier explained, was peculiarly fortunate at the inception of the movement for curriculum reform, for it was in possession of a larger body of objective data than any other subject. Its biggest problems at the present time, therefore, have to do with the application, rather than with the further prosecution, of vocabulary studies.

An examination of the vocabulary material at hand discloses the fact that spelling investigators, wittingly or otherwise, have been arrayed in two opposing camps, one deriving its verbal material from the written discourse of adults, the other from the written discourse of children. Many of our most prominent commercialized courses have rested, and still rest, solely on one or the other of these two major sources. In 1925, the writer, in connection with certain critical studies of the available vocabulary material, came to the conclusion that both of these important sources of words should be used in selecting the minimal spelling list, and published a report[1] of the method by which this can be accomplished. Almost immediately certain advocates of the exclusive use of adult discourse in the derivation and construction of the spelling vocabulary registered their vigorous dissent.

[1] *Elementary School Journal*, XXVI, 303.

It is a pleasure to observe that progress is being made toward a common understanding. At least differences of opinion do not seem so pronounced as at the beginning of the controversy. Let us take a moment to make this clear. In the construction of the spelling vocabulary, the writer proposed the inclusion of three types of words:

1. Words used with high frequency by both children and adults.
2. Words used with unusually high frequency by adults only.
3. Words used with unusually high frequency by children only.

A Criticism of the Plan

The most vigorous critics of this plan now accept in principle the first two of these proposals, which leaves the third as the only outstanding bone of contention. If some understanding can be reached regarding the disposition of words used by children only, there is little of consequence remaining for discussion.

Before entering into the details of this issue, it may be well to state that the acceptance of the third proposal does not lead to the inclusion of many words that would not otherwise be included. In a vocabulary total of 3,481 words, only 211 were admitted solely on this principle. If that were the only issue at stake, this chapter could perform a valuable service by coming to an immediate close. The cause of discussion, however, is not the 211 little words, nor even the fear that the principle, applied less conservatively, might lead to larger dis-

puted additions to the spelling list. It is rather the fear that the principle, once accepted in spelling, might extend the range of its application to other subjects.

The argument of the critics may be stated somewhat as follows:

1. There are no words used by children only.
2. If there seem to be, this is an illusion, due to the use of unreliable vocabulary investigations.
3. Even if there were, such childish material should never be inserted in the course of study.
4. If it should be, it should be taught merely incidentally.

Difference between Children and Adults in Word Usage

Let us now seriously examine these contentions. In considering the first, it is important to have in mind the facts regarding the difference between the word usage of children and that of adults. This difference is strikingly in evidence even in the case of words found in the writing vocabularies of both. If one selects for a spelling vocabulary the 3,009 words of highest frequency in the composite of eleven investigations of adult correspondence, one will include 2,511 words in the composite of five investigations of children's writing, but will omit 101 adult words that appear in five children's lists, 196 adult words that appear in four children's lists, and 312 adult words that appear in three children's lists. On the other hand, one will include 401 adult words that appear in only one children's list. These figures indicate what is now definitely known, namely, that even where adults and children use the same

words, they differ markedly in the frequency of usage of many of these words. This, however, is not the most marked difference manifested. The difference between adult and childhood usage reaches its extreme point in the case of 16 words found in every one of the five studies of children's writing and in no one of the eleven studies of adult correspondence. These facts provide an answer to the question, Do children use words that are rarely or not at all used by adults?

Difference Not Due to Inadequacy of Adult Data

The validity of this finding has been attacked by impugning the validity of the investigations used. In a recent article[2] Horn remarks:

> The data which he [Breed] used for adult writing needs are the somewhat inadequate data from the writer's [Horn's] compilation of 1922.

Professor Horn, I believe, is too modest in this statement. A comment of his in another publication[3] does fuller justice to his earlier list:

> The comprehensive investigation [Commonwealth List[4]] upon which this speller is based substantiates in a remarkable way the word list of the previous book [based on Horn's earlier compilation]. The present list in the light of all known data as to writing needs is 100 per cent efficient in

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[2] "Childish and Permanent Values in Curriculum-Making," *Chicago Schools Journal*, IX (1927), 288–94.

[3] *Lippincott's New Horn-Ashbaugh Speller*, p. viii. Philadelphia: J. B. Lippincott Co., 1926.

[4] Ernest Horn, *A Basic Writing Vocabulary: 10,000 Words Most Commonly Used in Writing*. University of Iowa Monographs in Education, First Series, No. 4. Iowa City, Iowa: College of Education, University of Iowa, 1926.

its vocabulary. The earlier word list was a little more than 95 per cent efficient.

There are three reasons for favoring the second of these statements:

1. The same types of results are obtained when Horn's Commonwealth List is used instead of his earlier composite.
2. Direct comparison of the Commonwealth List with the earlier composite shows that the two lists have a high degree of similarity.
3. Reliability of frequency values is not directly proportional to their magnitude.

When the 7,035 words of highest frequency in Horn's Commonwealth List were used, instead of his earlier composite list, in a comparison[5] with the 7,035 words in the composite of five children's vocabularies, the common element was found to be 58.5 per cent, a slightly smaller percentage than in the earlier comparison. The words used by children only numbered 2,918, and the words which appeared in all five childhood studies, but not among the 7,035 words of highest frequency in the adult list, numbered 35. This group of 35 includes 13 of the 16 words mentioned above. Of these 13, the following 8 words are not found in the whole 10,000 of the Commonwealth List:

bonfire	insect
cannon	kite
dive	tiger
elephant	violet

[5] Edgar Dale, "Comparison of the Commonwealth List with the Writing Vocabulary of Children." Unpublished study, Department of Education, University of Chicago, 1927.

The similarity between the results of the two comparisons is explained by the similarity of the earlier and later adult vocabularies. Comparison of the 3,009 words of highest frequency in the earlier adult composite with the same number of words of highest frequency in the Commonwealth List shows that 80 per cent of the words are identical, 11.5 per cent of the Commonwealth words are the simplest sorts of derivatives of words in the earlier composite, and only 8.5 per cent are entirely different words.[6]

So much, then, for the criticism that the disparity between childhood and adult usage is an illusion attributable to the unreliability of the adult data employed.

Children's Lists Not to Be Discredited

There is one other way to discredit the above factual findings in regard to the disparity referred to: discredit the mass of vocabulary material derived from children's themes. The idea is that Tidyman, Smith, Jones, Bauer, *et altera,* not only builded badly, but builded on foundations of sand. To these charges the reply is very easy. It has been definitely shown[7] that the vocabularies of children's writing are in general as reliable as the vocabularies of adult writing. Reliability is indicated by the degree

[6] R. W. Fairchild and Mae T. Kilcullen, "A Comparison of the Commonwealth List with a Composite of Eleven Adult-Correspondence Lists." Unpublished study, Department of Education, University of Chicago, 1927.

[7] Frederick S. Breed, "What Words Should Children Be Taught to Spell? II. Vocabularies of Various Types," *Elementary School Journal,* XXVI (1925), 212.

of consistency among the various lists purporting to provide a vocabulary of a given type; and it is determined by detailed comparisons of lists, not by theoretic discussions of their characteristics. The consistency, or agreement, among the lists in the adult field is about 50 per cent. The childhood lists do not fall below this figure.

One may admit as valid the criticism that the writing vocabularies based on the usage of children are not so complete as they should be, a criticism which applies also to the writing vocabularies based on adult usage. Nevertheless, it must be admitted that, with all their imperfections, these theme vocabularies provide the best index of the writing vocabulary of children now available. When these imperfections are removed, will the present figures on disparity increase or decrease? It may be safely predicted that they will increase, just as they did with the improvement of the adult vocabulary.

What Shall Be Done with Santa Claus?

The final question for discussion is, What shall be done with these words of exclusive childhood usage? For example, Santa Claus is not in the Commonwealth List, but he appears in four of the five childhood studies referred to above. Shall children be taught to spell the name of this festive old gentleman in regular fashion, or shall his name be consigned to the limbo of incidentalism and neglect? The writer would be willing to leave this issue to a vote of the school children of the country or to a vote of the elementary-school teachers, but such a

referendum might not be regarded as scientifically sound. He is therefore content to state the issue and leave it to the educational science of the future.

So far as our present knowledge goes, one may incorporate Santa Claus in the curriculum or omit him, without danger of conviction of an educational crime. The decision must perforce be based largely on theoretic considerations. It is not yet known for a certainty whether inclusion or exclusion will produce the better educational result; hence both practices will be followed until science takes the problem out of the field of speculation. The sociological extremists will exclude him. Curriculum designers of this type respect the interests of children only where they obviously coincide with the interests of adults. They cut off the polliwog's tail because no frog needs one. They ban mother's milk from the diet of babes and substitute meat and potatoes. To them temporary values in curriculum-making are like temporary teeth—they should be abolished, because permanent teeth are the exclusive fashion of adult life. To the writer it is a question of judicious enrichment versus pernicious impoverishment.

CHAPTER III

THE GRADATION OF WORDS

In the preceding chapters, consideration has been given to the problem of selecting the words to be taught in spelling. It seems evident that the selection of a minimal spelling vocabulary for the public schools is a highly technical and difficult task. How many words shall be incorporated in this list? What vocabulary investigations shall be used? Shall the word usage of adults be the sole basis of selection, or shall the usage of children also be considered? These and many other questions confront one who essays to supply the classroom teacher with the words to be taught in spelling. As we have already remarked, investigations to date indicate that the minimal list need not contain more than 3,500 to 4,000 words, and that it should be made up primarily of the words most needed by both children and adults in their writing.

After the minimal list has been determined, the next problem is that of gradation. The question here is: How shall the words in the selected list be assigned to the various grades? Since the selection of words is at present made on the basis of total frequency of usage, which in itself tells us nothing significant about grade location, it is evident that grading presents a new and additional problem.

The Need for Scientific Studies of Gradation

It may be well to state at once that little scientific work has been done on the gradation of material in any subject. In a very true sense it may be said that experts in curriculum construction have not yet seriously attacked the problem. Their energies to date have been devoted almost exclusively to the many intricate problems involved in the selection of materials. It is to be hoped that they will soon begin to study gradation of material as effectively.

In spite of the confusion and disagreement regarding the grading of words, the workers in spelling have made more progress than those in any other field. While in most subjects authors of courses and texts have not begun to study gradation scientifically, in spelling a beginning at least has been made. Fundamental principles are being discussed, and some of these principles have been objectively applied in the grade allocation of words.

Contrast this situation with that in arithmetic, for example. The method of grade placement in this subject is traditional and subjective. Gradation still rests for the most part on the practice of the past, supplemented by the opinions of teachers and course-makers. The writer is not aware of a single arithmetic textbook or course of study in arithmetic in which objective data on subject matter have been adequately collected and applied in accordance with some acceptable principle of gradation. In the field of the verbal problem, authors of texts have been convicted of gross errors in gradation on account of vocabulary difficulties. In the problems assigned to

a particular grade, many words, aside from technical terms, have been found of which 50 to 100 per cent of the children are ignorant. This condition can be remedied only after investigators have determined the essential reading vocabularies for the different grades, so that authors of texts can use them in the preparation of problem statements.

Grading Principles Defined

Mention was made above of the discussion of fundamental principles of gradation in the field of spelling. A number of different principles have been proposed, but as yet there is no general agreement as to which of them should be employed. We shall consider four principles that have been used in the grading of word lists:

1. *Degree of difficulty for the child.*—The more difficult the word, the higher its place in the grades.
2. *Frequency of adult usage.*—The more frequently the word is used by adults, the lower it is placed in the grades.
3. *First usage of children.*—Grade placement is determined by the grade in which the word first appears in the writing of children.
4. *Frequency of usage in the writing of children.*—To a given grade those words are assigned which the children use most frequently in their written discourse.

It should be observed that each of these principles can be applied in a definite and objective manner. Quantitative data for the application of the first principle, obtained by determining the percentage of misspellings on each word in the various grades,

appear in several spelling investigations. The best sources for such data are the Ayres-Buckingham Scale,[1] the Iowa Spelling Scales,[2] and the Sixteen Spelling Scales.[3]

As regards the second principle, very reliable frequency data are available for the words found in the correspondence of adults, or, if one prefers to use not only the frequency of usage, but also the range of usage, credit numbers representing both of these factors can be obtained.

Several investigations of childhood vocabulary provide definite information in regard to the grade of first usage of words, and at least two studies show the frequency of words by grades. Thus we are in a position to begin grading material in spelling by objective methods, if we can only decide upon the principle to be employed.

One finds one's self in a peculiar position when asked to decide which principle or combination of principles is best for this purpose. The problem is one in the field of instructional methodology, where the authority for many principles still resides in the opinions of experts, rather than in the results of scientific investigations. The situation can be illustrated by the early literature on the project method.

[1] B. R. Buckingham, *Buckingham's Extension of the Ayres Spelling Scale.* Bloomington, Illinois: Public School Publishing Co.

[2] E. J. Ashbaugh, *The Iowa Spelling Scales: Their Derivation, Uses, and Limitations.* Journal of Educational Research Monographs, No. 3. Bloomington, Illinois: Public School Publishing Co., 1922.

[3] Earl Hudelson, F. L. Stetson, and Ella Woodyard, *Sixteen Spelling Scales Standardized in Sentences for Secondary Schools.* Teachers College Bulletin, Twelfth Series, No. 19. New York: Teachers College, Columbia University, 1921.

Arguments were adduced in support of the method, but investigators had not submitted to scientific test the crucial question: Does the project method, as a matter of fact, enable the child to master the important material of the curriculum with greater ease than the methods that it is designed to supersede? In the matter of principles of gradation in spelling, the question that calls for a scientific answer is this: What principle or combination of principles will most facilitate the learning of the child? To this question there is as yet, it must be confessed, no conclusive answer. One is therefore compelled to study the workings and implications of the proposed principles as best one may, and select that principle or combination of principles that seems, from all the evidence at hand, to promise the most efficacious acquisition of spelling skill.

Discussion of Principles Used in Grading

A study of the four principles mentioned above has convinced the writer that they are by no means of equal value for grading purposes. If it is agreed, in line with what has just been said about facilitation of the learning process, that the basic principle in gradation is psychological, it should be observed that frequency of adult usage is not a psychological principle; it is sociological. When it is employed, as it has been in one of the prominent spelling courses on the market, the grade placement of material is determined, not by conditions in the mind of the child, but by conditions in the life of the adult. Material most used by adults is introduced to the

child at the earliest possible date, in order, apparently, that its acquisition may be the more certain and secure. The mental maturity and interests of children are not considered. The theory represents a recrudescence of the pedagogy of force, and is distinctly reactionary in its trend. It is typical, however, of the practices of the extreme sociological school in education.

The difficulty principle has much more in its favor. In the grading of subject matter it has generally made a strong appeal. This is largely on account of its psychological character; and there seems to be no question but that the grading of present school courses could be immensely improved if this principle were rigidly and accurately applied. It may even be said that much of the advance in the conduct of the public schools has accrued from a better adjustment of tasks to the capacity of the children.

There are considerations, however, that tend to make one skeptical in regard to the primacy of the difficulty principle in the field of spelling. The factor of interest, for example, introduces complications that cannot be ignored. In other words, there is a conflict between two psychological principles—difficulty and interest. Where the two agree in the placement of a word, there is, of course, no problem. Where they disagree, which shall be regarded as the determining factor? To illustrate, take the relatively difficult words *Santa Claus, Christmas,* and *Thanksgiving Day.* Children are tremendously interested in these words and use them in writing as early as the second grade, but a difficulty grada-

tion would postpone their study to a much later period. On the other hand, consider the following three-letter words: *fee, tax, tan, due, art, bay, aid, dim, ill, gas, war, key, joy, wed, per.* Most of them are as easy to spell as *cat* and *pig,* but few children exhibit a desire to use them in their writing until the sixth, seventh, and eighth grades. Shall we be guided by interest or by difficulty in the grade allocation of these words? In the opinion of the writer, there is little doubt about the answer to this question. Ease of spelling is not a sufficient reason for teaching a word low in the grades, nor difficulty for teaching it at a higher level. Placing a word at that level of maturity where the pupils are interested in using it in their written expression seems to promise greater economy in learning, and hence to reflect a sounder psychological practice.

This brings us naturally to a discussion of the two remaining principles, each of which is founded on the interest motive. The question here is: Which will distribute the words in the course more nearly in accord with the interests of the child—gradation according to first usage, or gradation according to most frequent usage? The chief objection to the first of these principles is that it locates too many words in the early grades. Tidyman found that 1,103 of the 3,000 words most frequently used by children in their writing were used as early as the third grade. This principle would, therefore, lead to the assignment of many more words to the earlier grades than could possibly be taught there. Moreover, the use of a word by a single pupil in a grade is not a safe index of the readiness of the rest of the

pupils in the grade for this word. It would seem much more sensible and sound to begin the gradation of the minimal list with the second grade, assigning to this grade the words most frequently used in the writing of second-grade pupils. The remainder of the list would then be canvassed for the words most frequently used in the writing of third-grade pupils, and by the same process the grading would proceed upward until all the words in the list had been located.

Data from H. J. Smith's study[4] may be used to make this method clearer. Smith tabulated 12,500 words from the spontaneous compositions of each grade from the third to the eighth, inclusive. For each word he shows the frequency of usage in each grade. See, for example, Figure 1.

Word	Frequency by Grades					
	VIII	VII	VI	V	IV	III
egg	1	2	9	13	3	19

FIGURE 1. AN EXAMPLE OF WORD TABULATION, SHOWING FREQUENCY OF A WORD BY GRADES

Suppose, now, that one desires to select from Smith's list 300 words for teaching in the third grade. The last column to the right in his table shows all the words used by third-graders. By the frequency-of-usage principle, one would select the 300 words in this column that have the highest frequency values.

[4] *Op. cit.*

Gradation according to Childhood Usage

The plan just described is what is meant by the writer when he refers to gradation in accordance with frequency of childhood usage. It can be illustrated in more detail by referring to the grading of 3,818 words in a recent publication.[5] From the investigation of children's themes made by Smith[6] and an investigation of children's letters made by William C. French,[7] grading indices based on frequency of childhood usage were secured for many of the 3,818 words. From the investigations of W. Franklin Jones[8] and W. F. Tidyman[9] two additional usage indices were derived, by computing the relation between grade of first usage[10] and grade of greatest frequency of usage. The Smith vocabulary was the one used for this purpose, since for each word it provides data concerning the grade of first usage and, as indicated above, also enables one to determine the grade of most frequent usage. The 1,205 words for which the frequency data in this study are most nearly adequate were graded by the frequency-of-usage principle, then by the first-usage principle, and a detailed comparison[11] was made of

[5] *The Breed-French Speller.* Chicago: Lyons and Carnahan, 1927.

[6] *Op. cit.*

[7] "A Study of Children's Letters." Unpublished study, Department of Education, University of Chicago, 1925.

[8] *Op. cit.*

[9] *Op. cit.*

[10] Jones assigned a word to "the lowest grade in which at least 2 per cent of the students used it." This was employed as the grade of first usage.

[11] C. B. Wood, "A Comparison of Two Methods of Grading Words." Unpublished study, Department of Education, University of Chicago, 1925.

results by the two methods. The data indicate that grading by the first principle places words, on an average, approximately one grade higher than that by the second. The first-usage gradings obtained from Jones's and Tidyman's studies were therefore increased by one grade to obtain an estimated usage grading.

When grading data were found for a word in all four of these investigations, the record appeared like that for the word *few,* reproduced below. The

	few	
French, 3		Smith, 3
Jones, 3		Tidyman, 4
	Grade Index, 3.3	

FIGURE 2. A RECORD CARD SHOWING DATA USED FOR GRADING A WORD

final grade position of the word was obtained by averaging the indices from the four investigations. When the data from these four investigations were inadequate for a word, supplementary data were sought in such studies as those made by Bauer[12] in New Orleans and Melcher[13] in Kansas City. When absolutely no childhood-usage data were available, as in the case of a limited number of words used by

[12] *Op. cit.*

[13] *Preliminary Report of the Committee on Spelling Appointed by the Elementary School Principals' Section.* Research Bulletin No. 2. Kansas City, Missouri: Public Schools, 1916.

adults only, the general rule of assignment to the eighth grade was followed, on the theory that the pupils should be introduced to such words just before discontinuing the study of formal spelling.

Different Results from Different Methods

The reader is now probably ready to ask whether or not there are significant differences in the gradation of the same words when different principles are employed. To throw some light on this question the data in Table IV are presented.

Table IV. Percentage of Agreement between Results of Different Methods of Grading Words

Grade	Difficulty of Spelling and Frequency of Adult Usage	Difficulty of Spelling and Frequency of Children's Usage	Frequency of Adult Usage and Frequency of Children's Usage
2	56.3	72.9	67.7
3	25.2	28.5	20.2
4	18.8	23.9	—
5	16.6	17.4	—
6	18.1	18.2	—
7	20.2	23.7	—
8	22.3	11.1	4.8
Average	21.3	22.4	27.5

The table shows the percentage of agreement in the grading of the same words when the principles mentioned were applied as described below:

1. *Difficulty of spelling and frequency of adult usage.*—The 1,000 words in the Ayres scale were graded according to the difficulty values of this

scale, and also according to the frequency values in the composite vocabulary of eleven investigations of adult correspondence described in Chapter I.

2. *Difficulty of spelling and frequency of childhood usage.*—The difficulty values were taken from the Ayres Scale and the childhood-usage values from an unpublished study by the writer.

3. *Frequency of adult usage and frequency of childhood usage.*—The writer's childhood-usage gradation was compared with gradation by the frequency values in the Andersen adult-correspondence list.

The table should be read as follows: Of the words assigned to grade 2 in accordance with the difficulty principle, 56.3 per cent were assigned to the same grade according to frequency of adult usage. It will be seen that in general the methods which have been compared agree more closely in the earlier grades than in the later ones, and that the average amount of agreement in the three comparisons is practically the same—about 28 per cent. This shows conclusively that very different results are obtained from these different principles of gradation. To some extent, of course, this difference is due to unreliability of the data employed, but inaccuracies from this source probably account for only a small part of the difference. This seems particularly true in regard to the results shown in the first column of the table. The difficulty values on the Ayres Scale and the frequency values of the Ayres words in the composite of eleven investigations of adult correspondence are both highly reliable, yet the differences in gradation are highly marked.

Comparison of Difficulty and Adult-Usage Methods

One can secure from Table V a more detailed understanding of the relation between difficulty and adult-usage grading. The 1,000 words on the Ayres Scale were assigned to grades 2 to 8 according to difficulty, the 142 words of least difficulty being assigned to grade 2, and the remaining words in groups of 143 to successive grades according to increasing difficulty. The same words were also graded according to frequency of adult usage, by the frequency values in the composite of eleven investigations of adult correspondence. The number of words assigned to each grade was the same as before, the second grade receiving the 142 words of highest frequency, the third grade the 143 of next lower frequency, and so on. The grading of each word by the one method was then compared with its grading by the other. Table V shows the results of this comparison.

The second column of the table shows how the words assigned to the second grade according to adult usage were distributed according to difficulty. Of the 142 words assigned to grade 2 by the usage principle, 80 were assigned to grade 2, 27 to grade 3, 15 to grade 4, and so on, by the difficulty principle. The most noticeable feature of the table, perhaps, is the difference between the grading by the two methods, a fact which was indicated by the relatively low percentage of agreement noted in Table IV. In the bottom row of the table is presented the median difficulty grading for the words assigned to

TABLE V. COMPARISON OF THE GRADATION OF THE 1,000 AYRES SCALE WORDS BY DIFFICULTY OF SPELLING AND BY FREQUENCY OF ADULT USAGE

Gradation by Difficulty of Spelling	Gradation by Frequency of Adult Usage							Total	Median Usage Grading
	2	3	4	5	6	7	8		
2	80	22	14	11	8	3	4	142	2
3	27	36	27	20	14	16	3	143	4
4	15	34	28	23	26	12	5	143	4
5	10	21	26	22	23	21	20	143	5
6	6	14	23	25	23	22	30	143	6
7	3	8	15	19	28	36	34	143	6
8	1	8	10	23	21	33	47	143	7
Total	142	143	143	143	143	143	143	1,000	
Median Difficulty Grading	2	4	5	5	6	6	7		

each of the grades on the basis of adult usage. By "median difficulty grading" is meant the position of their median in the difficulty scheme of gradation. For example, the words in the column for grade 8 have a median position of 7 on the difficulty scale. In no case does the general trend of the difficulty grading vary from the adult-usage grading by more than one grade. Similar medians for adult-usage grading are presented in the extreme right-hand column, for comparison with the difficulty grading. Here also a difference no greater than one grade is indicated. One should not, however, permit this use of median values to distort one's interpretation. It might be better to dismiss the medians as aids to interpretation, for it is probably of more significance to note that, without exception, the words placed in

any grade by one method are distributed over all the grades by the other method.

Difficulty and Childhood Usage Compared

In Table VI is presented a comparison of difficulty gradation with gradation on the basis of childhood usage. The 1,000 Ayres Scale words were graded according to difficulty. Then the difficulty grading of each of these words was compared with its childhood-usage grading in a list of 3,818 words. Here again the gradation by one method nowhere differs from the median gradation by the other by more than one grade. The results indicate that, on the whole, the 1,000 words tend to take a lower place in the grades when the interest principle is applied than when the difficulty principle is applied. This

Table VI. Comparison of the Gradation of the 1,000 Ayres Scale Words by Difficulty of Spelling and by Frequency of Childhood Usage

Gradation by Difficulty of Spelling	Gradation by Frequency of Childhood Usage							Words in Ayres List Only	Total	Median Usage Grading
	2	3	4	5	6	7	8			
2	111	19	9	1	1	0	0	1	142	2
3	52	38	25	10	2	0	0	16	143	3
4	35	40	33	18	6	1	0	10	143	3
5	19	30	33	25	20	6	2	8	143	4
6	8	29	24	21	27	24	0	10	143	5
7	2	8	14	27	35	34	5	18	143	6
8	3	8	5	11	29	47	16	24	143	7
Total	230	172	143	113	120	112	23	87	1,000	
Median Difficulty Grading	3	4	5	6	7	7	8			

conclusion is suggested by the tendency of the words to cluster on the left side of the table, and also by the increasing totals of the columns from right to left. Before, however, we can conclude with certainty that the gradation in the one case is lower than that in the other, an additional factor must be taken into consideration.

In the comparison of gradings by these two methods, there is the assumption that the words on the Ayres Scale constitute a satisfactory sample of the whole range of difficulty of the minimal spelling list. This assumption, which is implied in our uniform distribution of the 1,000 words over the whole grade range, is probably not valid. For example, the 1,000 commonest words of the Ayres Scale are certainly of lower average difficulty than the remaining words in the minimal list. If this be conceded, the true difficulty grading of the words would be lower than that presented in Table VI. This lower grading would lessen the difference between the two types of grading exhibited, for the childhood-usage grading shown in the table represents the grade allocation of these 1,000 words when they are considered along with the rest of the minimal list. This assumption, it may be explained, did not enter as a factor in the interpretation of Table V, because in that case the same 1,000 words were graded by each method as if they constituted the entire spelling vocabulary.

In order to test the above assumption, a comparison[14] was made between the difficulty grading and

[14] For assistance in making this comparison the writer is indebted to Olive McFadden and Ethel A. Elder.

the childhood-usage grading of all the 3,818 words in the before-mentioned list. The difficulty grading was made on the basis of objectively determined difficulty values, the least difficult words being assigned to the second grade, those next in difficulty to the third grade, and so on. The childhood-usage grading was that of the writer, previously referred to. The number of words assigned to each grade was the same in the two gradings.

In Table VII are shown the results of this comparison. It is evident from this table that words do not receive a lower gradation by the childhood-usage method. This is best seen in the columns entitled "Median Usage Grading" in Tables VI and VII. Whereas in Table VI the usage gradation was found to average lower than the other in five of the seven

TABLE VII. COMPARISON OF THE GRADATION OF 3,818 WORDS BY DIFFICULTY OF SPELLING AND BY FREQUENCY OF CHILDHOOD USAGE

Gradation by Difficulty of Spelling	Gradation by Frequency of Childhood Usage							Total	Median Usage Grading	Percentage of Agreement
	2	3	4	5	6	7	8			
2	207	101	36	16	2	0	0	362	2	57.2
3	77	153	182	122	35	7	0	576	4	26.6
4	50	153	168	167	74	28	8	648	4	25.9
5	23	95	144	135	135	76	40	648	5	20.8
6	3	36	59	84	150	137	107	576	6	26.0
7	2	34	43	77	103	114	131	504	6	22.6
8	0	4	16	47	77	142	218	504	7	43.3
Total	362	576	648	648	576	504	504	3,818		Average 31.8
Median Difficulty Grading	2	4	4	5	6	7	7			

grades, in Table VII the usage gradation is found to be higher in one grade, lower in two, and the same in the remaining four. It is fairly evident that one organization of the words is neither more nor less difficult than the other. An excess of difficulty in one grade is balanced by the opposite condition in another.

It is well to notice that gradation by difficulty of spelling and by frequency of childhood usage, the two methods of grade placement just described, when applied to the list of 3,818 words, give identical positions to 31.8 per cent of them, a higher percentage than in any of the other comparisons.

Conclusions

It seems evident that a solution of the problem of grading curriculum materials requires (1) the establishment of the principle or principles that are to be applied, and (2) the determination of methods for applying these principles. Although intelligent discussion aids, no doubt, in the selection of principles, specific investigations of the effects of these various principles and methods of applying them are necessary before satisfactory conclusions can be reached.

A point has been reached in the study of word gradation where the advantages and disadvantages of several competing principles stand out in bolder relief. It is apparent that these principles differ greatly in the theoretic support which they can command and in the results which they produce. Frequency of adult usage has least to recommend it.

Grade of first usage is unpractical and unpsychological—unpractical because of the congestion of words it occasions in the lower grades, unpsychological because it represents the standard of precocity, and not of normalcy. Difficulty of spelling and frequency of usage among children are the most satisfactory bases, and of these the second seems to be the better. That is, it seems most psychological to teach a child, in a given grade, to spell the words which he most commonly uses in his writing in that grade.

Fortunately, for the application of each of the principles treated in the foregoing discussion, objective data have been secured. These data, however, are not in every instance as extensive as they should be. This is true, for example, in regard to the data available for the application of the childhood-usage principle, and is due to the failure of many investigators to supply frequency of word usage by grades. Grading words by this method will be materially improved when more adequate data are provided.

The degree to which results differ when different principles are applied in grading the same words is indicated by the small percentages representing number of words identically located. These percentages vary from 27.3 to 31.8. Difference in results is also indicated by the fact that words located in a given grade by one method are often distributed over all the grades by another method.

CHAPTER IV

ORGANIZATION OF LESSON UNITS

In the preceding chapters, the problems of selecting and grading the words of the minimal spelling list have been discussed. We are now ready to consider the problems arising in connection with the presentation of these words to the pupils, or, broadly speaking, the problems of method, for a method of instruction may be defined as a mode of presenting the material of the curriculum. We shall not quarrel with those who prefer to define method as a mode of directing the learning processes of pupils, for we mean the same thing.

Mistakes in Teaching Spelling

Nobody understands the difficulties of teaching spelling better than those who are doing it, and nobody understands the difficulties of directing the instruction of teachers in this subject better than those who have carefully studied the scores of investigations relating to spelling instruction. In view of the conscientiousness of teachers and the copious scientific data on spelling problems, it might be supposed that teachers in good communities would not fall far short of the scientific ideal in classroom technique. This idea, however, has little

foundation in fact. The errors of teachers, even in good schools, quickly become evident to anyone who will take the time to visit their rooms and make careful observations. During a survey[1] of spelling instruction in a midwestern city having a population of 65,000, the writer observed the following procedures, every one of which is either unjustifiable or exceedingly questionable:

1. Devoting a regular period of fifteen minutes daily to spelling, and, in addition, a study period of the same length.
2. Marking pretest[2] papers of individuals during school hours while the rest of the pupils in the room idly await their turn.
3. Drilling pupils individually and privately on words misspelled in the pretest, while the rest of the class idly await their turn.
4. Having the pupils spend whole periods after the pretest in study according to their own devices, while the teacher confines her activity to disciplinary rather than study supervision.
5. Teaching from a list of words or a group of sentences placed on the blackboard before the recitation starts, rather than from words vividly written in the presence of the pupils.
6. Neglecting to focus the attention of pupils on points of special difficulty in words.
7. Neglecting to syllabify long and difficult words.
8. Substituting other modes of practice for the most important kind, namely, writing the words.
9. Using a considerable portion of the spelling period

[1] Frederick S. Breed, "Spelling in the Racine Public Schools," *The Racine School Survey*, II, 228–39. Racine, Wisconsin: Board of Education, 1926.

[2] By pretest is meant a test given on the words of an assignment before the words are studied. This subject will be discussed later.

for general memory drill instead of for scientific spelling drill. A case in point is that of a teacher who assigned the words of the lesson as personal names to as many pupils, called these pupils to the front of the room, and then required members of the class to recall, not only the spelling of the words, but the very words themselves.

10. Permitting the written work in spelling to be done on almost as many kinds of paper and tablets as the number of pupils in the room.
11. Permitting the use of a random mixture of pens and pencils in the same room.
12. Using two periods and two classes for the teaching of spelling by the group method in a room containing from thirty to thirty-five pupils in the same grade, instead of teaching all the pupils in the room in one class.

More recently, in the course of a similar survey[3] in a smaller city, much the same situation was found, with additional teaching activities open to criticism. Note the following list:

1. Irregularity and inadequacy of the time allowance.
2. Failure to use the adopted method.
3. Interference of project work with the systematic course in spelling.
4. Too rapid pronunciation of words in tests.
5. Insufficient attention to the writing difficulties of children.
6. Mispronunciation of words by teachers.
7. Failure to give a sentence containing the word, following its pronunciation in a test.
8. Presentation of incorrect forms of a word.
9. Unsatisfactory management of the time allowance.
10. Ineffective training of pupils in methods of study.

[3] Frederick S. Breed, "Spelling," *A Study of Materials and Methods of Instruction in the Wilmette Public Schools*, Sec. 4, pp. 1–7. Wilmette, Illinois: Board of Education, 1927.

When we are told that measurements by means of standard spelling tests showed that the pupils in both cities were above the test norms, these facts become even more suggestive. If misdirected teaching effort can be observed in schools of this type, what must be the situation in the thousands of schools of lower efficiency? It is evident that classroom teachers are much in need of scientific direction, and that the responsibility for this direction rests with their supervisors.

Length of Recitation Period

It is not enough to hand our teachers a graded word list and instruct them to go ahead with their teaching. The curriculum-maker should, and can, do much more to aid the teacher in her difficult task. After the words have been selected and graded, they should be properly grouped into lessons or units of work. For this purpose, consideration should be given to the following:

1. Time allowance.
2. Number of words per unit.
3. Organization of reviews.
4. Phonetic grouping of words.

The number of words to be taught in a unit is naturally related to the length of the spelling period as well as to the length of the entire word list. A recent study,[4] by F. C. Ayer, of time allotments in forty-nine cities having a population of 100,000 or

[4] "Facts on Time Allotment of Subjects," *The Elementary School Curriculum*, p. 140. Second Yearbook. Washington: Department of Superintendence, National Education Association, 1924.

more shows that the average number of minutes per week devoted to spelling in the various grades is as follows:

TABLE VIII. TIME ALLOTMENT FOR SPELLING IN MINUTES PER WEEK

Grade	I	II	III	IV	V	VI	VII	VIII
Minutes	39	82	87	85	82	78	72	73

According to this table, the average amount of time devoted to the subject is fifteen minutes per day. If the first grade is excluded from consideration, on account of the fact that many school systems do not teach spelling in this grade, we find that the daily time allotment is from fifteen to twenty minutes. In grades above the first, therefore, this may be taken as the general practice of representative American school systems. It is the best standard for time allowance now available for use.

NUMBER OF WORDS PER WEEK

In arranging the material of the course of study for teaching purposes, the amount of work should be so adjusted that it can be accomplished within the average time allowance. If 3,500 words are distributed in grades 2 to 8, the average number of words per year is 500. Since the average school year consists of thirty-six weeks, this list can be taught by assigning only fourteen new words per week, and, since teachers can satisfactorily handle

twice this number of words in the time allotted, provision can also be made for about as many review words each day as there are new words.

Organization of Reviews

In most courses of study, there is room for much improvement in the organization of words for review purposes. Provision for the repetition of words has too often lacked scientific refinement. Our knowledge of the psychology of skill suggests that two principles should be applied:

1. The number of repetitions of a word should be proportional to its difficulty.
2. The repetitions should occur at intervals of increasing length.

The first of these principles requires that a difficulty index be determined for each word in the course. Fortunately, the difficulty values for a majority of the words in a properly selected course can be obtained from three available sources. These are the Iowa Spelling Scales, the Sixteen Spelling Scales, and the Ayres-Buckingham Scale, to all of which reference was made in Chapter III. The values not found in these scales should be derived by the same method which the authors of the scales employed; that is, by submitting the words for a given grade to a sufficiently large number of pupils in this grade and finding the percentage of correct spelling. Two hundred spellings on a word provide a sufficiently reliable difficulty value.[5]

[5] Ashbaugh, *op. cit.*, pp. 23–24.

After the difficulty values of the words have been obtained, it is a relatively simple, though somewhat tedious, process to arrange for the repetition of words in subsequent lessons. The plan of distribution of reviews is based on the psychological fact that forgetting is most rapid immediately after practice ceases, and continues at a decreasing rate with the passage of time. The writer has found it convenient to begin the distribution of review words by recording the difficulty value of each word in each grade in terms of its step value on a twenty-five-step scale, such as that first used by Ayres. The step value is derived from the percentage of correct spelling by a simple statistical process. The easiest words appear on Step 1 of this scale and the hardest on Step 25.

A much simpler but less accurate method would be to distribute repetitions according to the percentages of correct spelling. The objection to this is that the difficulty values of words are not in proportion to these percentages. The percentages will enable one to rank words in the order of difficulty, but they will not show accurately how many times more difficult one word is than another. For example, note these difficulty steps and the corresponding percentages of correct spelling: Step 4, 96; Step 8, 84; Step 12, 58. The steps represent difficulty in proportion to their designating number.

Whether the daily-assignment or the pretest method is used, in ordinary practice a pupil has two reviews of a word in the first week of study. The subsequent reviews, the writer has found, can be adjusted as indicated in Table IX.

TABLE IX. REPETITION OF WORDS AT INCREASING INTERVALS ACCORDING TO DIFFICULTY

Grade	Intervals				
	One Week after First Instruction	One Month after First Instruction	One Semester after First Instruction	One Year after First Instruction	Two Years after First Instruction
2	10-25*	13-25	16-25	19-25	.....
3	12-25	13-25	16-25	19-25	.....
4	10-25	13-25	16-25	19-25	13-25
5	9-25	13-25	16-25	19-25	12-25
6	8-25	13-25	16-25	19-25	11-25
7	7-25	13-25	16-25	19-25	.....
8	6-25	13-25	16-25	.....	.....

*Represents words having difficulty values from 10 to 25.

It will be observed that in the fifth grade, for instance, words having difficulty values from 9 to 25 are repeated during the week following the first instruction. A month later the words having difficulty values ranging from 13 to 25 in this same group confront the pupil again. A semester later the words having difficulty values from 16 to 25 appear once more. A year later his lessons contain again the words having difficulty values from 19 to 25. Finally, two years later, the words ranging from 12 to 25 in difficulty are repeated. This plan, therefore, provides for seven repetitions of the most difficult fifth-grade words, and correspondingly fewer repetitions of words of lesser difficulty.

PHONETIC GROUPING OF WORDS

When the review words have been properly distributed, the curriculum-maker is ready to provide

for the satisfactory arrangement of words in lesson units. Two points should be observed in organizing these units:

1. Words that are phonetically and orthographically similar should appear together.
2. Homonyms should appear together.

Authority for the first point in arrangement is obtained from the experiments of both Tidyman[6] and Wagner.[7] Authority for the second comes from an experiment conducted by H. C. Pearson[8] in the Horace Mann School, Teachers College, Columbia University. It has been found that children are able to master the spelling of the words more easily when these modes of arrangement are followed; hence the teacher should present together such words as *came, same, name* or *rake, lake, shake. Bear* and *bare, wood* and *would, no* and *know,* should also appear together.

In opposition to this plan, it has been urged that each word should be regarded as a separate problem in itself. This is an extreme application of the theory that ability to spell a word is a specific ability and not a general one. The truth seems to be that the ability to spell certain words enables one to master more easily the spelling of certain other words; that is, that spelling ability, in some instances, has general value. Experimental studies of

[6] "Value of Grouping Words according to Similar Difficulties in Spelling," *Journal of Educational Research,* X (1924), 297–301.

[7] "Experimental Study of Grouping by Similarity in the Teaching of Spelling." Doctor's thesis, University of Pennsylvania, 1912.

[8] Henry Suzzallo and Henry Carr Pearson, "Comparative Experimental Teaching in Spelling," *Teachers College Record,* XIII (1912), 37–48.

the transfer of training would lead one to infer that transference of training from one word to another is possible when the words have similar difficulties or identical elements, and since this theory is supported by experimentation with spelling material, phonetic grouping of words must be regarded as more scientific than random grouping.[9]

The Study-Test versus the Test-Study Method

We are now ready to decide upon the general type of method to be employed. Shall we use the more familiar daily-assignment method, or give our preference to the so-called pretest method? The former may be termed the study-test and the latter the test-study method. The chief difference between the two is this: in the former the pupil studies all of the words in a given assignment and is then tested for his efficiency; in the latter he is tested on the words in an assignment first and studies only the words he misspells.

Two recent investigations throw much light on the relative merits of these two teaching procedures. E. E. Keener, formerly Director of Instructional Research, Chicago Public Schools, carried on an experiment,[10] involving 976 pupils in grades 2 to 8, in the learning of 100 words. He found that the

[9] Corroboration of this point is found in Clifford Archer's experimental study of transfer effects in spelling. Transfer occurred in proportion to the similarity of the words. See his article, "Transfer of Training in Spelling," *Elementary English Review*, V (1928), 55–61.

[10] "Individual Method Versus Group Method of Teaching Spelling," *The Nation at Work on the Public School Curriculum*, pp. 128–29. Fourth Yearbook. Washington: Department of Superintendence, National Education Association, 1926.

test-study method gave better results in grades 4 to 8; the study-test method, better results in grades 2 and 3. This occurred regardless of the fact that the teachers were more experienced in the study-test method. The greatest economy of the test-study method probably results from the fact that pupils making perfect scores in the pretests are excused from study. In Keener's experiment the number thus excused was about 12 per cent.

Clifford Woody, Director of the Bureau of Educational Reference and Research, University of Michigan, conducted a similar experiment[11] in grades 6, 7, and 8 in the public schools of Adrian, Michigan. This experiment is important on account of the application of refined statistical methods to determine the significance of the differences in the achievement of the pupils under the two methods. Woody concluded that there is no significant difference in the test results of the two methods. There would still be an advantage, however, in favor of the test-study method, according to this experiment, because of the release of pupils from study on account of perfect performance in pretests. If the number of such pupils in this experiment was as great as in the Keener study, the greater economy of the pretest method would be marked indeed.

One of the strong arguments for the pretest method is economy in the process of study. This is mentioned in the following comment by Keener:

[11] "The Evaluation of Two Methods of Teaching Spelling," *Studies in Education*, pp. 155–71. Yearbook Number XV of the National Society of College Teachers of Education, 1926. Chicago: University of Chicago Press, 1927.

> The testimony of the majority of teachers at the end of the experiment was very markedly in favor of the individual (pretest) method. Even though many of them had not had previous experience with it, they favored it because of the greater interest on the part of the pupils, economy of pupils' time, and opportunity of giving help where it was needed.[12]

The economy of the method is further indicated by elaborate data on the ability of children to spell the words of their assignments without study. It has been found that second-grade children can spell half the words in their grade list in advance of study, and fifth-graders, three-fourths of the fifth-grade list. To most persons thinking about the matter, it seems an unwarranted waste of time to have children give their attention to so many words they already know. In fact, spelling is inclined at this point to pursue the policy advocated by the leaders in the testing movement, i.e., to determine the deficiencies of pupils in advance of instruction and concentrate on these deficiencies. It truly seems that the test-study method is destined to displace the method which has been hitherto employed.

One of the arguments often urged against the pretest method is based on the theory of persistence of the initial error. According to this view, it is inadvisable to use a method that permits children to get a wrong start on a word. The argument is related to certain general principles in the psychology of skill. The theory sounds plausible, but, like many of the applications of general psychological principles to specific problems in education, it is to be regarded with a measure of skepticism. Woody[13]

[12] Keener, *op. cit.*

[13] *Op. cit.*

found that there was no significant tendency in the pretest method to cause errors made in the first spelling of a word to persist, and this conclusion is supported by other investigators.

A question has arisen regarding the consistency of this method with a standard time allowance. How can one justify uniformity of time allowance when there are marked differences in the ability of pupils to spell the words of a given assignment? Certainly, slow learners with a large number of words to learn cannot be expected to achieve as much in fifteen minutes as rapid learners with a small number of words. If the time is constant, something else must vary. Since the writer is not prepared to abolish the time schedule, some other adjustment to individual differences must be employed. This adjustment, in his opinion, should be made in the standards for achievement, which should vary as pupil ability varies. They should be based on the actual attainments of pupils of different levels in satisfactorily taught schools. It should be kept in mind, however, that the foregoing expresses merely a general attitude toward the time schedule, and that, as earlier indicated, there may be adjustments of the time allowance for very bright pupils.

To-day it is becoming the fashion in such skill subjects as spelling and arithmetic to aim at 100 per cent accuracy on certain specified essentials. This is, of course, a very pretty goal, but as educators we can profitably exchange some of our idealism for a dose of realism. The danger is that we demand the humanly impossible. Better to find

out what the real results of good teaching are and aim at these. Then each child will be expected to master as much of the spelling list as his ability permits, and the known standards will indicate the appropriate amount.

The general procedure in the test-study method may be briefly outlined as follows:

Monday	Test all pupils on the new words in the week's assignment.
Tuesday	Supervise pupils' individual study of the words missed on Monday.
Wednesday	Test all pupils on the new and the review words in the week's assignment.
Thursday	Supervise pupils' individual study of the words missed on Wednesday.
Friday	Test all pupils on the new and the review words in the week's assignment.

This chapter has aimed to show how spelling material should be organized for teaching purposes and to indicate the general method of instruction that should be employed. The next chapter will deal with methods of study and study direction.

CHAPTER V

DIRECTING STUDY ACTIVITIES

Up to this point in our discussion of the teaching of spelling, our attention has been engrossed by three problems. We have considered the selection of the word list, its gradation, and its organization for instructional purposes. The next major problem confronting the teacher is one of method: What are the most effective teaching procedures that can be employed? It will be observed that this topic, with which the present chapter is concerned, lies at the very center of the teacher's interest, and embraces those activities in which she is usually most desirous of cultivating skill.

Results of Investigations and Opinions of Experts

In any attempt to aid the teacher in formulating her teaching procedure in spelling, two sources of information should be carefully examined: the results of scientific studies, and the opinions of experts. Naturally, scientific investigations constitute the more important source, and these have fortunately been numerous enough to determine most of the steps which the teacher should employ. In fact, they have even been numerous enough to occasion a

measure of embarrassment to one in search of the proper steps. A capable graduate student who was assigned the task of listing the teaching activities for which there is scientific authority submitted to the writer a report containing thirty-two items, and it is not at all certain that his list is complete. Such a list seems unwieldy for the classroom, and it is needless to say that teachers would probably doubt the wisdom of a supervisor or a writer who handed them so long a list for daily use.

Before attempting to formulate a list of the most vital teaching activities based on scientific results, the writer made a tabulation of the activities recommended by six authors of spelling texts, all of whom have reputable standing as scientific workers. In this tabulation all the different activities were expressed in terms of pupil activity and the frequency of each was recorded. The number of different teaching activities recommended by these authors was thirty-four. This number, which is several times the average number of activities recommended by them, seems to show that they are far from unanimity of opinion regarding the particular methods of instruction to be employed. Further analysis of the tabulation indicates, however, that there is more agreement than is evident on the surface. When the thirty-four activities were classified under eight major kinds, it was found that most of the eight were represented by three or more activities each. These major activities, expressed in terms of the mental processes required of the pupil, were: (1) seeing the word, (2) hearing its pronunciation, (3) pronouncing it, (4) using it in a

sentence, (5) visualizing it, (6) spelling it, (7) focusing attention on difficult parts, and (8) writing it. The order in which the activities are mentioned was not determined by the tabulation.

Although there is considerable disagreement in the nature of the steps emphasized by various authorities and some also in the number and order of steps, the agreement in essentials, or fundamental activities, is marked. The tabulation reveals what might be termed a consensus of opinion of competent workers in regard to the fundamental teaching activities.

Each of these eight study steps has ample justification in the extensive literature on methods of teaching spelling. A few of the most valuable references are recorded in the next section, "Directions for Study," each in connection with the particular activity which it justifies. Special attention should be given to the careful experiments conducted abroad by Lay and afterwards verified by Fuchs and Haggenmüller. These experiments have demonstrated the unusual importance of seeing, pronouncing, copying, and spelling words in the process of learning to spell. The efficacy of these procedures in comparison with others studied, according to Lay, is shown in Table X.

The reader will note the small number of errors accompanying the last-mentioned method in the table, which involves seeing, copying, and pronouncing the word. "Spelling" a word is also seen to be among the most effective procedures. Meumann[1]

[1] *Vorlesungen zur Einführung in die experimentelle Pädagogik und ihre psychologischen Grundlagen*, III, 578. Leipzig u. Berlin: Verlag von Wilhelm Engelmann, 1914 (2. verm. Aufl.).

remarks that in the case of "spelling" the pupil dwells on the word longer and makes a relatively thorough analysis of it, hence this "commonly forbidden method" yields good results.

TABLE X. NUMBER OF SPELLING ERRORS MADE BY PUPILS TAUGHT BY DIFFERENT METHODS (AFTER LAY)

Method in Terms of Pupil Activity	Average Number of Errors per Pupil
Hearing words without pronouncing	3.04
Hearing words and pronouncing softly	2.69
Hearing words and pronouncing aloud	2.25
Seeing words without pronouncing	1.22
Seeing words and pronouncing softly	1.02
Seeing words and pronouncing aloud	.95
Spelling words (saying the letters) aloud	1.02
Copying words and pronouncing softly	.54

DIRECTIONS FOR STUDY

It is now necessary to express and organize the study activities so that they can be understood and used by the pupil as he studies. Under a heading addressed to the pupil, the writer would suggest the following organization of learning activities:

WHAT YOU ARE TO DO

1. Look at the word and say it softly.[2]
   Your teacher will often ask one of you to say it aloud.

[2] a) W. A. Lay, *Führer durch den Rechtschreibunterricht gegründet auf psychologische Versuche und verbünden mit einer Kritik des ersten Sach- und Sprachunterrichts.* Wiesbaden: O. Nemnich, 1905 (3. verm. Aufl.).

b) H. Fuchs u. A. Haggenmüller, "Studien und Versuche über die Erlernung der Orthographie," *Sammlung von Abhandlungen*

2. Look at the word and say it in a sentence softly.[3]
   Your teacher will often ask one of you to say your sentence aloud.
3. Look at the word and say the letters softly.[2]
   Your teacher may have some of you do this aloud.
4. Close your eyes and say the letters softly.[4]
   Your teacher will often ask one of you to do this aloud.
5. Write the word and say the letters softly as you write.[2]
   Look at your book if you need to.
   Your teacher will pass among you and watch you as you do this.
6. Draw a line under any part of the word that is hard for you.[5]
   Your teacher may ask you to tell what part is hard.
7. Cover the word on your paper with your hand.
   Now write the word without looking at your book.[2]
8. Look at your book to see whether you got it right.
   Keep trying until you do.

These learning or study steps have been selected and arranged with a view to their use in all grades from 2 to 8. The method of study should not be varied essentially from grade to grade. The pupil should early acquire a good method and adhere to it. Moreover, the method of study should not be affected by the general method of instruction employed. No matter whether the teacher uses the study-test or

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a. d. Gebiete der pädag. Psychologie und Physiologie, II. Berlin, 1898.

c) For a critical discussion of (a) and (b), see Ernst Meumann, *op. cit.*, pp. 564–622.

[3] Leta Hollingworth, *The Psychology of Special Disability in Spelling*, pp. 53–58. Teachers College Contributions to Education, No. 88. New York: Teachers College, Columbia University, 1918.

[4] Edwina E. Abbott, "On the Analysis of the Factor of Recall in the Learning Process," *Psychological Review Monograph Supplements*, XI (1909), 159–77.

[5] Frederick S. Breed, "The Value of Emphasizing Points of Special Difficulty in Words." Unpublished study, Department of Education, University of Chicago, 1925.

the test-study method, the problem is the same: to provide the pupils with the best possible study procedure. Although the study-test and the test-study methods differ in the kind of teacher direction supplied, they should not differ in the kind of study steps employed. In fact, the writer has recommended that the spelling during the first three weeks in each grade be taught by the study-test method and thereafter by the test-study method, with the same study steps in each case. The purpose of this preliminary use of the study-test method is to give the pupils training in the mode of study, so that they may be able to use it effectively later when working under the test-study method.

Before pupils are asked to apply the steps mentioned above, the teacher should introduce each new word appropriately. It seems best to give these teacher activities the fullest publicity among the pupils; hence even here the pupil is addressed.

What Your Teacher Will Do

1. Your teacher will say the word for you.[6]
   She will say it by syllables (parts), if it is a long word.[7]
2. She will say it in a sentence.[8]
3. She will write it on the blackboard and have all of you say it together.[9]

[6] Ernest Horn, "Principles of Method in Teaching Spelling as Derived from Scientific Investigation," *Fourth Report of the Committee on Economy of Time in Education*, p. 65. Eighteenth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1919.

[7] *Ibid.*, p. 66. See also H. Alena Wolfe and Frederick S. Breed, "An Experimental Study of Syllabication in Spelling," *School and Society*, XV (1922), 616–22.

[8] Hollingworth, *op. cit.*

[9] Lay, *op. cit.*

A comparison of this teaching technique with the foregoing analysis of the methods of selected authorities will show that the eight major steps of the latter are all included.

The manner in which the above-mentioned directions for pupils and teacher will fit into the pretest (test-study) procedure, previously advocated, will become clearer from the following more detailed schedule of the work for each day of the week:

Schedule of a Week's Work

Monday.—Introduce each new word in the week's assignment according to the following plan:

1. Pronounce the word—by syllables, if long.
2. Use it in a sentence.
3. Write it on the blackboard and have the pupils pronounce it in concert.

Following this preliminary work, administer the pretest in column form. Use each word in a sentence after pronouncing it. In the second grade, the teacher will mark the papers herself; in the third grade she will teach the pupils how to mark them, after exchanging papers; and from the fourth grade up the pupils will exchange papers and do the marking under the teacher's direction.

Tuesday.—Supervise the study of the pupils in the use of the study steps previously outlined. Have each pupil study only the words misspelled on Monday. Pupils who misspelled no words are excused from this study period.

Wednesday.—Administer a column test on both the new and the review words in the week's assignment. Use each word in a sentence after pronouncing it. Excuse no pupils from this test. Follow the suggestions regarding the marking of papers given above.

Thursday.—Supervise the study of pupils as on Tuesday. Have them study the new and review words which were misspelled on Wednesday. Give special attention to their use of

the established study steps. Pupils who misspelled no words on Wednesday are excused from this study period.

Friday.—Test all pupils, as on Wednesday, on all new and review words in the week's assignment. Mark papers as before. Strive to obtain 100 per cent correct spelling at this point.

Developing Proper Study Habits

Throughout this treatment of teaching methods, great stress has been laid on methods of study. We are driven in this direction, not only by investigations in spelling, but also by the results of experiments with supervised study in various subjects. Though the problem of supervised study has been given less attention by the elementary than by the secondary school, there is no reason why this problem should be monopolized by the latter. It should be remembered that the most popular, and perhaps the most generally effective, plan of supervised study, now known as the divided-period plan, had its origin in the elementary school, and it would seem to be just as much in place there as it ever was. The earliest grade of the elementary school is not too early to begin the supervision of the child's study habits. In fact, one who familiarizes himself with the thinking processes of children will soon be convinced that still better results would be obtained if the study habits of children were given proper supervision long before school entrance.

Although it has become clear in the course of the supervised-study movement that training pupils in methods of study is one of the outstanding features in a program of supervised study, and although, in

periodicals and books, educators have stressed again and again the importance of such training, the schools do not yet seem to have fully sensed its importance. This is especially true in the elementary grades, yet even in secondary schools, where supervised study is a fairly common feature of the school work, it is difficult to find satisfactory training in methods of study.

The writer had occasion recently to survey the spelling work in a system of schools where a method of study similar to that outlined in this chapter had been adopted for use in the spelling classes. The survey took place toward the end of the school year, so that the teachers had had plenty of time to do the training expected of them. It was found in general that the adopted method of study was not followed carefully. Some teachers ignored it, some used the directions that appealed to them and ignored the rest, some followed the directions conscientiously. When the writer investigated the study habits of individual pupils at different levels of spelling achievement in several grades, their lack of training became evident. Two-thirds of the pupils examined used only two study steps: (1) spelling the word while looking at the book, and (2) spelling the word while looking away from the book. The significant thing about this situation is the meagerness of the pupils' study technique. One almost wonders whether they might not have acquired a method of study as simple as this without the intervention of a teacher.

To remedy a condition like that just described, one should begin with the supervision. It is the

business of the supervisors to overcome such apathy and neglect, to enlighten teachers in regard to the training objectives, and to stimulate effort in the direction of their attainment. This effort must be conceived as an application of the familiar principles of habit-formation. How can we expect to train children in proper habits of study without any diligent program of habit-forming? There seems to be no other way to succeed than by taking up these study habits one at a time, motivating them, demonstrating them, and giving the pupils accurate, attentive practice in them. When this is done, it can safely be predicted that the pretest method will show far greater superiority over the old daily-assignment method than it does at present.

Types of Special Exercises

In the remaining portion of the chapter, attention will be given to certain types of exercises designed for special training in important skills. As the first of these, exercises for training in contextual spelling may be mentioned. They seem necessary for two reasons: (1) spelling words in context is the mode of everyday life, and (2) children cannot spell the same words as accurately in context as in isolation. Although the time given to spelling does not permit the organization of all spelling practice in written context, it does permit the organization of special context exercises containing the most difficult words. These are commonly known as dictation exercises and still have an important place in the teaching of spelling.

Dictation exercises are found in several varieties:

1. Unrelated sentences containing words found in the regular spelling list.
2. Selections from literature quite unrelated to the spelling list.
3. Letters containing difficult words selected from the grade list and previously taught.

The last of these is obviously the best, on account of its social utility and its close correlation with the adopted spelling vocabulary. The letters should be of the personal and friendship type in the earlier grades, and of the business as well as friendship type in the later grades.

Following is a sample letter prepared for use in the fourth grade. The italicized words, selected on the basis of objective difficulty indices, have been previously taught.

CAN YOU USE YOUR WORDS IN A LETTER?

Dictation

Dear Jane:

I must tell you about going to the circus.

Mother said she hadn't a *crumb* of food in the house, so I went on an *errand* to the store. We had *oyster* stew, potatoes with *gravy*, and orange *juice* for lunch. Then we all *squeezed* into the car, Father *stepped* on the gas, and we were soon feeding the *elephant*. The men watched us. I suppose they thought we might *poison* the animal.

Aunt Carrie got her hair *bobbed*.

Lovingly yours,

The picture-dictation exercise is a particular form of dictation exercise in which a picture, instead of the teacher, indicates to the pupil the object whose name is to be spelled. The sample on page 69,

Can You Write What It Is?

1. _ _ _

2. _ _ _

3. _ _ _

4. _ _ _ _

5. _ _ _ _

6. _ _ _ _

7. _ _ _ _

8. _ _ _ _ _ _

What To Do

Here are some pictures of things you know.
See if you can write their names.
Number your paper from 1 to 8.
Now look at the first picture. It is number 1.
Write what this is where you have number 1.
Now look at the picture where it says 2.
Write what it is where you have 2.
Do the others in this same way.

FIGURE 3. A SAMPLE PICTURE-DICTATION EXERCISE

From *The Breed-French Speller*
Used by permission of the publishers, Lyons and Carnahan

designed for the second grade, will illustrate its character. As a practice device, such an exercise breaks the usual monotony of drill procedure and is well adapted to pupils at the primary level.

Another type of special exercise is one designed to train and test children on the meaning of words. This has been only recently introduced into spelling courses. It is coming into use because investigations have shown that there is a close relation between knowledge of the meaning of a word and ability to spell it, a finding which seems easy to understand. What chance has a word to get into the written work of a pupil if he does not comprehend its meaning? And if he does not incorporate a word in his written work, what opportunity is there for practice in and correction of its spelling? In other words, knowledge of the meaning of a word seems to lead to its use and, when incorrectly written, its correction. These two abilities are therefore probably causally related.

In the preparation of exercises of this second type, valuable suggestions can be gathered from standardized tests for the measurement of visual vocabulary. The best of these, such as Test 3 of the Stanford Achievement Test,[10] and the Inglis Tests of English Vocabulary,[11] are of the best-answer or multiple-response type.

Below is an exercise on the meaning of words, designed for the seventh grade. Each sentence has

[10] T. L. Kelley, G. M. Ruch, and L. M. Terman, *Stanford Achievement Test.* Yonkers-on-Hudson, New York: World Book Co., 1922.

[11] Alexander Inglis, *The Inglis Tests of English Vocabulary.* New York: Ginn & Co., 1924.

a word in italic type near the beginning and five words in italic type near the end. The pupil is asked to write or underline that word among the five near the end that makes the best sense.

An Exercise on Word Meaning

1. A *cemetery* is a *school graveyard college field park*
2. *Thorough* means *hard easy written wise complete*
3. An *acquaintance* is *known admired loved envied honored*
4. An *immense* building is *wide high huge solid wonderful*
5. *Occasionally* means *already sometimes always now whenever*
6. *Familiar* means *near old intimate remembered worn*
7. *Physical* exercise concerns *mind hands feet body school*
8. To give a *mortgage* is to *report pledge beg sell loan*
9. *Apparently* means *quickly likely surely certainly poorly*
10. A *superintendent sells supervises advises interviews reports*

The fourth type of special exercise that seems advisable is one designed for training in the use of the dictionary. The need for dictionary training can be easily explained. The number of words in the essential spelling vocabulary of a progressive public school is not far from 3,500 to 4,000, but it is known that the average child upon completion of the eighth grade understands the meaning of at least 10,000 words.[12]

Now consider that there are over 400,000 words in the English language, counting inflections and derivatives. It is evident that children are being taught to spell about one-third of all the words they

[12] Edward L. Thorndike, "The Vocabularies of School Pupils," *Contributions to Education*, I, 69–76. Edited by J. Carleton Bell. Yonkers-on-Hudson, New York: World Book Co., 1924.

understand and a very small percentage of all the words in the English language. Although the words that they are taught will constitute, with their repetitions, about 98.5 per cent of all their later writing, society does not condone the misspelling of the remaining 1.5 per cent; and hence provision must be made somehow to get these spelled correctly.

The dictionary is the best recourse in this situation, quite clearly offering the most economical solution of the problem. The child should be trained to use the dictionary to determine the pronunciation, meaning, and spelling of words, for it is assumed that all through life he will be learning to spell some of the many different words which appear but rarely. Like the thrifty householder, he will purchase for his own those tools of which he makes a constant use; the others he will wisely rent or borrow.

CHAPTER VI

HANDLING CASES OF SPELLING DISABILITY

Not long ago the writer received a letter from Oklahoma, written by a mother who asked what could be done to improve the extremely poor spelling of her two boys. The problem of this woman is not an uncommon one. Parents and teachers in large numbers find themselves facing it, and wonder, like the woman in Oklahoma, what is to be done about it.

In the first place, one must not underestimate the complexity of the problem. There is a tendency to reason erroneously from similarity of reaction to similarity of cause; to labor under the supposition that since all cases of spelling disability look quite alike, they are all the result of a common cause. If this were true, the educational procedure would be simple indeed: one would merely choose the one proper pedagogical remedy and administer it.

The reply to this mother is presented below, because it may help to indicate the complexity of the problem and the difficulties one would encounter in attempting to effect a remedy without more detailed knowledge of the cases.

I have your letter of inquiry in regard to the spelling ability of your two boys. I wish I might be able to give you some help at this distance. This help, however, could not be

very definite and specific without more information regarding the cases.

Spelling disability is not due to any one single cause, but may be due to any one of a number of causes or to a combination of these causes. One would, therefore, have to know something about the nature of the boys' difficulties before he could advise you definitely in regard to remedial procedure.

Below I am listing some of the principal causes of inability to spell. A study of this list, coupled with your knowledge of the boys, might enable you to discover where the trouble lies.

Causes of Spelling Disability

1. Causes largely physical in nature—
   a) Defective vision.
   b) Defective hearing.
   c) Speech defect.
2. Causes largely psychological in nature—
   a) Inferior learning capacity.
   b) Poor observation.
   c) Poor auditory memory.
   e) Immaturity.
   d) Poor visual memory.
   f) Lack of interest.
3. Causes largely pedagogical in nature—
   a) Lack of acquaintance with the English language.
   b) Writing difficulty.
   c) Lack of training.

You will see that sensory defects are listed first. In a study aimed to reveal the source of the boys' difficulties, one should, in my opinion, have their vision and hearing examined by competent specialists. If a child has myopia or astigmatism, these eye defects will interfere with his progress in spelling.

I shall not take time to discuss the list of causes in detail. I would suggest that you go through this list in a search for the most likely source of trouble for the boys.

Numerous attempts to classify kinds and causes of spelling disability appear in the literature of the subject. The reader will observe that the classification given in the foregoing letter directs attention toward the conditions to which deficiency is attributable. Such a classification should aid us to iden-

tify the principal causes and eventually to discover the remedies therefor. The classification lays no claim to completeness. It is offered rather as a preliminary and tentative program.

Beginnings of Diagnostic Work

Scientific diagnostic work in spelling began several decades ago. As early as 1896, Witmer[1] studied the case of a boy fourteen years of age whom he found to be very bright but extremely poor in spelling. He gave the boy careful diagnosis through various tests and questions, and discovered that he had practically no visual memory for words. Only with great difficulty could he imagine how a word looked when written or printed. He had a good visual memory for figures and colors, but depended upon the *sound* of the word in spelling.

It is apparent that in the list of causes of spelling disability given above this case is classifiable under 2d), poor visual memory. The boy's method of spelling was what is known as "spelling by phonetic analogy." Needless to say, he who spells by sound in a language as unphonetic as English is lost—not irretrievably, but until his method undergoes revision. The remedial procedure in a case like this is evidently to substitute a visual for an auditory basis of learning. In the case of Witmer's subject, weakness in visual memory was traced to an ocular defect, which made clear visual images impossible. After the boy's eyes had received proper treatment,

[1] "A Case of Chronic Bad Spelling," *Psychological Clinic*, I (1907), 53–64.

he made rapid progress in spelling in spite of the years of injurious neglect.

The relation between visual defects and the ability to spell was pointed out clearly even before Witmer's study. Adelaide Wyckoff,[2] in 1892, reported the administration of a series of tests to five women, all of whom were very poor spellers. The tests for optical defects showed astigmatism and myopia in one, astigmatism in three, and normal vision in only one. From cases of the above sort, it seems clear that examination for visual defects should be the first step in a diagnostic program in spelling.

Methods of a Recent Investigation

Among the most suggestive pieces of diagnostic and remedial work recently completed in spelling is that of Hazel Floyd.[3] By means of standardized tests, teachers' judgments, and school records, she selected for detailed study twenty-six pupils, all of whom showed marked deficiency in spelling.

In order to make clearer to the reader the method of selection, one of Miss Floyd's tables is herewith reproduced. It gives the spelling scores and grade ranks for a group of pupils, the last six of whom, numbers 10 to 15, were chosen for the detailed study mentioned above. As may be seen by the table, their average spelling deficiency was slightly

[2] "Constitutional Bad Spellers, *Pedagogical Seminary*, II (1892), 448–51.

[3] "Cases of Spelling Disability: Their Diagnosis and Treatment." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.

over three grades. The test used in this case consisted of fifty words from the Ayres-Buckingham Scale, Column S.

TABLE XI. RESULTS OF INITIAL TEST FOR SELECTION AND DIAGNOSIS OF REMEDIAL CASES

Pupil	Present Grade	Spelling Score	Grade Equivalent of Score
1	6A	98	9A
2	6A	90	7A
3	6A	90	7A
4	5A	86	7B
5	5A	78	6A
6	6A	76	6B
7	6A	60	5B
8	5A	48	4B
9	5A	46	4B
10	6A	32	3A
11	5A	28	3B
12	6A	24	3B
13	6A	24	3B
14	5A	10	2B
15	5A	6	1A

The results of this test and the judgments of teachers were checked by a second test composed of fifty words from the Ayres-Buckingham Scale, Column R. Each case was finally classified only after the remedial instruction had begun. This instruction continued for five weeks and was accompanied by further tests of achievement, tests of intelligence, analysis of spelling errors, and the preparation and analysis of individual case histories.

The variety of major causes for the difficulties of these pupils, as indicated by the evidence, is seen in the following classification: defective vision, 2;

defective hearing, 1; speech defect, 1; inferior learning capacity, 5; poor observation, 3; poor visual memory, 2; poor auditory memory, 2; immaturity, 2; lack of interest, 4; lack of acquaintance with the English language, 1; writing difficulty, 2; lack of training, 1.

Further details are provided in the following excerpt from Miss Floyd's report:

> The instruction was both individual and group. When several cases were thought to possess the same or similar difficulty, they were taught together for administrative economy. It also seemed practical to do this in view of the fact that the study would be made more applicable to regular classroom conditions. The number of special lessons which each case received from the experimenter ranged from 19 to 27.

Case Studies of Two Pupils

That the nature of this work may be more fully understood, brief reports of two cases are presented. The first of these was a boy who was one to two years below standard in history, science, arithmetic, and reading, and three years below in language and spelling. His mental age was three years below the standard established for his chronological age of fifteen years and nine months. He read and wrote slowly. Physically he appeared to be normal.

Case I

Kind of case—

1. Psychological.

Causes of disability—

1. Inferior learning capacity.
2. Slow rate of writing.
3. Poor retention.

Symptoms—

1. Spelling retardation of three years.
2. Mental retardation of three years.
3. Slow rate in reading and writing.
4. Inability to recall a word after the following one was pronounced.
5. Many words omitted.
6. Many words left unfinished.

Kind of errors prominent—

1. Omissions.
   a) Whole words.
   b) Parts of words.

Treatment—

1. Ample time given for writing each word.
2. Rate of pronouncing words gradually increased as subject's rate of writing and his retention improved.
3. Word pronounced for him several times.
4. Memory tests and exercises: oral and written responses in recalling digits, letters, nonsense syllables, and words.
5. Copying words at increasing rates.
6. Dictation at increasing rates.
7. Writing series of words at increasing rates from memory.
8. Flash-card drills.

Results—

1. Increase in rate of writing.
2. Increase in number of correctly spelled words.
3. Decrease in number of errors in misspelled words.
4. Increase of nearly three years in spelling age.

The amount of improvement in this case is unusually large. One cannot expect to do so well in all cases. Where the diagnosis or the remedial procedures have been faulty, less encouraging results may be expected. This case shows very plainly, however, the possibilities with certain pupils. It is little short of remarkable that a child can bridge

a gap of three years' educational retardation as a result of special treatment during a period of only five weeks. One would find a result like this more difficult to accept if similar results were not being obtained in other subjects. Quite as surprising is a case in reading[4] reported by W. S. Gray. A fourth-grade boy, more than two years below his grade standard in reading ability, was able to double his rate score and triple his comprehension score in a period of only two months. Remedial instruction following the diagnosis increased his rate score in silent reading from 35 to 71, and his quality score from 18 to 52.5.

The next case is somewhat different in type and as common in occurrence. It is that of the child who is lacking in interest. The boy studied in this instance was normal socially and physically, except that he was slightly under weight. He had average intelligence, or better (his I.Q. was 104), but he was practically three years below standard in spelling. He had a reputation for being lazy in school work, and showed no alarm or even concern over his deficiency in spelling.

The summary of the case is as follows:

Case II

Kind of case—
1. Psychological.

Causes of disability—
1. Lack of interest.
2. Poor retention.
3. Mispronunciation.

[4] "The Diagnostic Study of an Individual Case in Reading," *Elementary School Journal*, XXI (1921), 577–94.

4. Lack of knowledge of phonics.
5. Carelessness.

Symptoms—

1. Normal intelligence.
2. Three years below standard in spelling.
3. Misspellings fairly "intelligent."

Kind of errors prominent—

1. Omission of silent letters.
2. Difficulty with doubles.
3. Confusion of *ei* and *ie*, *le* and *el*, *sion* and *tion*.

Treatment—

1. Trained in phonics.
2. Taught with other cases, for purpose of motivation.
3. Given competitive exercises, in order to arouse interest.
   a) Scores compared with standard scores.
   b) Scores compared with those of other pupils.
4. Tested often, for purpose of motivation.

Results—

1. Increase in interest, effort, and attention.
2. Increase of one and one-half years in spelling age.

It is evident from an examination of the record of Case II that lack of interest was the principal deterrent and that better motivation of work was primarily responsible for the improvement, the effective factors in this motivation being knowledge of results and competition.

The conclusion regarding the effectiveness of these factors finds support in the results of other investigators. For example, Thomas J. Kirby comments as follows in regard to the motivation of drill exercises in an elaborate investigation[5] in arithmetic: "The author feels that the children's knowledge of the record of their previous performance,

[5] *Practice in the Case of School Children*, p. 43. Teachers College Contributions to Education, No. 58. New York: Teachers College, Columbia University, 1913.

united with the desire each one had to surpass his previous record, was the greatest contributing factor to the improvement."

Remedial Work and General Methods

Diagnostic and remedial work of the type described promises to have results that reach far beyond the particular benefits to individual cases. The indications are that one of the results will be the improvement of general methods of instruction in spelling. In this connection a case of inattention and poor visual memory in the sixth grade is of interest. The boy in question was less than a year retarded mentally, and was above the average in all subjects except art, handwriting, and spelling. In these he was three to four years below standard. He was apparently in good health, except that he was 6 per cent under weight and was exceedingly nervous. He handled materials clumsily, talked nervously and incessantly, cried easily, and was difficult to control because of his supersensitiveness. He was normal in visual and auditory acuity.

The boy seemed absolutely unable, however, to concentrate his attention upon an entire word. Finally, the experimenter, in her search for an effective method, tried the device of "mimic writing." Using the blunt end of a pencil on the table at which she and the pupil sat, she produced the movements required for writing the words being studied. The pupil became interested in the procedure as a game and thereafter did his best concentrating. With the continuation of this teaching

procedure, he showed steady improvement in his ability to attend to the details of words. This improvement in attention evidently resulted in more accurate word impressions and better memory, for the tests after study showed decided improvement in spelling ability.

The above case is cited to illustrate the efficacy of a device that may have a much more general application. That is, there may be regular classes in which better concentration of attention on the details of words can be secured by this procedure. Improvement in generally applicable methods of instruction is not, however, the main hope or the main need. The results of research during the last quarter of a century will probably be found fairly adequate for pupils making normal progress. It is expected, rather, that a new chapter in spelling method will develop, a chapter in what might be termed the pathology of spelling instruction. Is it too much to hope that educators in the future will be able to identify the principal pedagogical diseases that afflict problem cases, and to discover the prescriptions and operations, or, in other words, the particular methods and devices, that will effect the desired cures?

On the whole, the results of the case studies described are extremely encouraging. The improvement in each instance cited above was very marked. Lest the reports of these various cases give rise to an unwarranted degree of optimism, it should be added that the remedial worker is not always so fortunate or successful. In several of the twenty-six cases described in the investigation from which

most of the above material is taken, the improvement was slight or negligible. This does not demonstrate the hopelessness of these cases, of course. It indicates merely that the solution of the problem was not discovered; hence one may believe that further study might have revealed the solution.

The hopeful aspect of such work is that many children who are now languishing in a rut of failure, stagnation, and despair may be lifted out of this rut and started on the road to normal achievement. Before the schools can do this in any general way, however, classroom teachers must attain a greater mastery of standard instruments of measurement and diagnosis than they possess to-day. The proportions of their task may be indicated by the fact that since 1910, by a conservative estimate, approximately a thousand such instruments have been constructed and published. It is quite improbable that many teachers in service will obtain a satisfactory knowledge of these necessary tools without special training in the technique of testing, such as is now offered in scores of summer schools and many extension courses. Moreover, their success in the use of these tools will be more certain if, in the schools, they can be given the assistance of a specialist in testing, one who is competent and ready to assume leadership in the work. Special study of testing problems, and the type of leadership suggested, will do much to give our teachers the necessary competence.

In the next chapter we shall discuss some of the problems involved in the measurement of spelling ability.

CHAPTER VII

MEASURING THE RESULTS OF INSTRUCTION

The idea of measuring the ability of pupils in the elementary-school subjects is nothing new. For centuries teachers have been preparing and giving examinations designed to test the achievement of their pupils. Within the last two decades, however, the technique of testing pupils has been developed and refined to an enormous degree. During this relatively short period progress in educational measurement has been greater than during all the centuries preceding. The many standardized and near-standardized measuring instruments that have been published since 1910 show an impressive variety of types and embody in their construction a similar variety of ingenious statistical procedures. No teacher can afford to ignore this movement or to work without its aids. It seems appropriate, therefore, that an attempt be made to answer the question, How may modern methods of measurement be employed in the subject of spelling?

Measurement in spelling was given its first real impetus by the work of Buckingham.[1] In 1913 he published a spelling scale which was of particular

[1] *Spelling Ability: Its Measurement and Distribution.* Teachers College Contributions to Education, No. 59. New York: Teachers College, Columbia University, 1913.

significance because of the statistical procedures employed in its construction. Then, in 1915, came Ayres's scale,[2] a contribution which has been the foundation for most of the important later work in spelling measurement. Since Ayres's procedures have become basic in the measurement of spelling, it will be well to examine carefully the construction of his scale.

Description of a Spelling Scale

The spelling scale devised by Ayres may be represented by a horizontal line divided into twenty-five equal parts, as shown in Figure 4. One might better say that this is the basic schematism for any

A	100	99	96	96	94	92	88	84	79	73	66	58	50	42	34	27	21	16	12	8	6	4	2	1	0
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

B

FIGURE 4. BASIC SCHEMATISM OF THE AYRES SPELLING SCALE

The line AB represents the scale. Numbers below this line from 1 to 25 indicate steps of difficulty of words. Numbers above the line indicate percentages of correct spelling, which define the steps of difficulty and determine the location of words on the scale.

particular grade, since the Ayres Scale is in reality composed of seven different scales, one for each grade from the second to the eighth, spaced consecutively at carefully determined intervals.

The twenty-five parts or steps on the scale represent degrees of difficulty of spelling. Words of the lowest level or degree of difficulty are located on

[2] *A Measuring Scale for Ability in Spelling.* New York: Russell Sage Foundation, 1915.

the step farthest to the left. This may be called Step 1. Words of the next higher level are located on Step 2, and so on, to Step 25, on which the hardest words are located. The finished scale consists of columns of words so selected and arranged that the words in any one column are equal in difficulty, and are a step higher in difficulty than the words in the column preceding.

The difficulty of each word is determined from the spellings of a large number of children. If a word is spelled correctly by all the children in a given grade, it goes on Step 1 of this scale; if it is spelled correctly by 99 per cent of the pupils, it goes on Step 2; if spelled correctly by 50 per cent of the pupils, it goes on Step 13, and so on. The step position of a word corresponding to its percentage of correct spelling is obtained from a table of values of the probability integral, to be found in almost any good book on statistics.[3]

Use of a Spelling Scale

A scale of this kind is not in a form to be submitted to pupils. In other words, it is not a test, but a source of test material. The chief value claimed for it is that it enables one to prepare more reliable spelling tests. Whereas in the olden days spelling examinations were composed of words of varying and unknown difficulty, now they may be made up of words of equal and known difficulty. Moreover, the words found in the modern scientific scales have

[3] See, for example: H. O. Rugg, *Statistical Methods Applied to Education*, pp. 389–90. New York: Houghton Mifflin Co., 1917.

been selected with due regard to their importance.[4] Finally, the teacher is provided with a standard by which she can determine, after the test, whether her pupils are spelling with normal efficiency for their grade.

An illustration may make this clearer. Suppose the teacher has a third-grade group to whom she desires to give a spelling test. She turns to the Ayres Scale and finds the column, let us say, beginning with the words *except, aunt, capture, wrote, else.* There are seventy-seven words in the column, all of approximately equal difficulty. She selects fifty words from this column for a test. After giving the test in the usual manner, she deducts 2 per cent for each word misspelled on any paper and computes the average percentage of correct spelling for her group. This class score she compares with the norm that appears on the scale above the column from which her words were chosen. The norm in this case is 58. If her class percentage is 58, she knows that her third-grade pupils have normal spelling ability, or are up to the grade standard.

In 1923, J. C. Morrison and W. A. McCall published a series[5] of eight equivalent lists of fifty words

[4] This does not mean that the content of standardized tests and scales is in every way satisfactory. Many tests that even now are rated among the best were constructed without the use of approved curriculum-making technique. The test-maker has usually selected his material with much more care than is displayed in the ordinary course of study, but, with the application of more scientific methods in the selection of material, improvement in content may reasonably be expected. The problem is important, because teachers, stimulated by the presence of certain items in standardized tests, may now be drilling pupils on materials and processes that do not belong in a scientifically constructed course of study.

[5] *Morrison-McCall Spelling Scale.* Yonkers-on-Hudson, New York: World Book Co., 1923.

each, selected from the Ayres Spelling Scale and the Buckingham Extension of this scale. The value of this work lies in the fact that it spares teachers the trouble of selecting test words from the scales.

More Recent Uses of Scale Data

A still more effective method of using the scale values of words is exemplified in certain of the more recent spelling texts.[6] In these texts each unit of work is accompanied by a standard. The standard informs the teacher as to how many of the words in the unit the children may be expected to spell correctly in advance of study, provided they have normal spelling ability. For example, consider the following assignment of sixteen new words for the fourth week of the third grade:

Fourth Week

pound	wing	spell	speak
round	ring	spelling	nearly
sound	ringing	vacation	leading
wound	cherry	wrist	automobile

Standard: 9 Right

The standard, *9 Right,* means that the average third-grade class can spell nine of these words correctly in advance of instruction. By this more modern adaptation of scale data, the teacher, without any extra labor, but simply in the course of her regular teaching activities, measures her pupils each week as accurately as the spelling scales would enable her to do it.

[6] *The Breed-French Speller; Lippincott's New Horn-Ashbaugh Speller.*

A Test for Survey Purposes

Up to this point consideration has been given to the measurement of achievement in a single schoolroom. Sometimes, however, it is desirable to survey the spelling achievement in a whole school, city, or even state. Certain problems then arise that are not encountered on the classroom level. In 1919 the writer had the privilege of planning the measurement of spelling in the survey of public education in Virginia. It seemed desirable to prepare a test that would (1) be of the same type as that used by Ayres in deriving his standards, namely, a column test; (2) economize the time of pupils and examiners; (3) contain words that appear frequently in the written discourse of both children and adults; (4) provide lists of words of equal difficulty for all the grades tested; (5) provoke misunderstanding in smallest degree during dictation because of the examiner's or pupil's dialect; (6) cover the range of ability in grades 3 to 7; (7) be adapted equally well to rural and city schools; and (8) yield a body of results that would lend themselves to approved methods of statistical treatment. The test[7] is presented in Table XII.

This test, it will be observed, consists of twenty words taken from successive columns of the Ayres Scale. Third-grade pupils were tested on words numbered 2 to 11, fourth-grade pupils on words numbered 5 to 14, and so on. By this arrangement,

[7] Frederick S. Breed, "Spelling," *Virginia Public Schools: A Survey of a Southern State Public School System*, Part 2, p. 93. Yonkers-on-Hudson, New York: World Book Co., 1921.

the words assigned to the various grades were equally hard for them. This is shown by the percentages in Columns III, IV, V, VI, and VII, where the standard percentage of correct spelling for each word and grade is given.[8]

TABLE XII. THE VIRGINIA SPELLING TEST

No.	Words	Column in Ayres Scale	Grade in Childhood Lists		Midyear Percentage Standard					Absolute Value
			Bauer	Jones	III	IV	V	VI	VII	
1	come	G	2	2	....	....	....	....	....	7.5
2	was	H	2	2	92	....	....	....	....	8.5
3	foot	I	2	2	88	....	....	....	....	9.5
4	happy	J	2	2	84	....	....	....	....	10.5
5	could	K	2	2	79	92	....	....	....	11.5
6	once	L	2	2	73	88	....	....	....	12.5
7	pretty	M	2	2	66	84	92	....	....	13.5
8	always	N	2	2	58	79	88	....	....	14.5
9	uncle	O	3	2	50	73	84	92	....	15.5
10	beautiful	P	4	3	42	66	79	88	....	16.5
11	surprise	Q	5	4	34	58	73	84	92	17.5
12	vessel	R	5	5	....	50	66	79	88	18.5
13	century	S	7	7	....	42	58	73	84	19.5
14	invitation	T	7	7	....	34	50	66	79	20.5
15	necessary	U	6	6	....	....	42	58	73	21.5
16	experience	V	7	7	....	....	34	50	66	22.5
17	athletic	W	6	5	....	....	....	42	58	23.5
18	convenient	X	7	7	....	....	....	34	50	24.5
19	decision	Y	0	8	....	....	....	....	42	25.5
20	recommend	Z	0	8	....	....	....	....	34	26.5

The Virginia test differs markedly from the tests mentioned earlier, in two respects: it contains a much smaller number of words, and it consists of words selected from successive steps rather than from the same step on the scale. The difference in

[8] The Virginia test was later used in the survey of the rural schools in the State of New York. See M. E. Haggerty, "Spelling," *Rural School Survey of New York State: Educational Achievement*, pp. 181–88. Ithaca, New York: Joint Committee on Rural Schools, 1922.

number of words is justified by the difference in the purpose of the tests. A central purpose of the classroom teacher is measurement of achievement of individual pupils. For this purpose experts very generally recommend that no less than fifty words be used, because, with a smaller number of words, the error of individual scores is unduly large. In other words, the scores on a ten-word test do not form a reliable basis for conclusions regarding the ability of particular pupils. In the case of a survey, however, the purpose is not the measurement of individual pupils, but the measurement of groups; for example, rural sixth-graders, city eighth-graders, the eighth grades in a given county, and so on. The measure of a group is expressed in terms of an average score, usually the median. For this purpose, a smaller list of words suffices. The smaller test may show a large error of measurement when applied to individual pupils, but at the same time have satisfactory reliability when used in the measurement of a group. The explanation is statistical. The law is as follows: The probable error of an individual score and that of the group score are inversely proportional to the square root of the number of pupils measured. In other words, if an individual score from the ten-word test had a probable error of 20 per cent, the group or average score of 100 pupils on the same test would have a probable error of $\frac{20\%}{\sqrt{100}}$, or $\frac{20\%}{10}$, or only 2 per cent.[9]

[9] T. L. Kelley, *Interpretation of Educational Measurements*, p. 93. Yonkers-on-Hudson, New York: World Book Co., 1927.

The Column Test

All of the tests that have been discussed thus far are of the column or list variety. In a test of this kind, isolated or single words are dictated by the teacher and written by the pupils. The question often arises as to whether this is the best type of test for measuring ability in spelling. The popularity of the column test can be explained on two grounds: it is economical of time, and it is necessary when the test material is selected from the most widely used scales. The latter point means simply that a column test should be used when words are selected from a scale like that of Ayres, because this was the type of test employed by the scale-maker when the spellings were secured on which the standards were based. Comparison of the performance of a given group of pupils with the standard performance would otherwise be unscientific.

The Dictation Test

The type of test ranking next to the column test in popularity is the dictation test. In this test, words on which the pupils are to be tested are embodied in sentences. In many respects the dictation test seems superior to the column test. Its chief point of superiority is the fact that it places the child in a situation which more closely resembles the typical situation in which the need for spelling arises, that is, writing words in sentences. Why, then, should this type of test not be used exclusively? This brings us back to the economy argument mentioned above. There simply is not enough time to

do all the necessary testing by this method. A compromise is therefore made, according to which most of the testing is done by the column method, the dictation method being employed as a check-up on the most difficult words after the teaching and other testing have been completed.

In spite of the fact, therefore, that the column test does not accurately duplicate the conditions of social usage, and results, moreover, in an overestimate of the pupil's ability to spell the assigned words, amounting to as much as 5 or 10 per cent,[10] it is continued in use as an economical instrument. It may be conceded, however, that standards based on contextual or dictation spelling are better indices of efficiency and that standardized tests in this form, other things equal, are probably to be preferred.

New-Type Tests

In experiments now in progress, two forms of new-type tests are being investigated: a multiple-choice test and an error-correction test. In the first of these, each item contains three or four misspellings of a word and one correct spelling. For example:

1. noticible noticable noticeable noticeible

The pupil is directed to underscore the correct spelling.

The error-correction test is composed of items like the following:

[10] a) Cook and O'Shea, *The Child and His Spelling*, pp. 74–93.
b) W. F. Tidyman and Helen A. Brown, "The Extent and Meaning of the Loss in 'Transfer' in Spelling," *Elementary School Journal*, XVIII (1917), 210–14.

1. He stood in the (recieving) . . . . . line.

In this test the word to be spelled is presented incorrectly in parentheses. The pupil is directed to write this word correctly on the dotted line.

In trials with three different lists of words, the validity of the error-correction test was shown to be as high as that of a good standardized test, and therefore high enough for regular testing in spelling. In one case, this test had a validity coefficient of .90; in another, .94; and in a third, .96.

Composition Tests

The ideal form of spelling test has not yet been invented. It would be a test in which the pupils wrote, spontaneously and in meaningful connection, the words on which it was desired to test them. As an approach to this ideal, some have advocated that misspellings in spontaneous composition be used as an index of spelling ability. There are serious difficulties, however, in this procedure. Testing by this method yields unduly high percentages of efficiency, evidently because many children are as wise as their preceptors—they maneuver to avoid words about which they are uncertain, just as the writer would have done when he came to the word "maneuver" in this sentence, had a dictionary not been handy to dispel his uncertainty!

Monroe[11] has done some interesting work in attempting to develop a type of test to solve this

[11] W. S. Monroe, J. C. DeVoss, and F. J. Kelly, *Educational Tests and Measurements*, p. 219. Boston: Houghton Mifflin Co., 1924.

problem. It is known as the timed-sentence test. It is a form of dictation test in which the sentences are read at the standard handwriting rate of the grade in which it is administered. It is supposed that the standardization of the rate of dictation provides a closer approach to the life situations in which spelling takes place than is provided by any other method.

A sample timed-sentence test[12] designed for a fourth grade is given below:

A Timed-Sentence Spelling Test of Fifty[13] Words Taken from Column O of the Ayres Scale

(60) The *public appear* to want it.
(27) The *population* of the *district* is five hundred.
(13) We *refuse* to *attend* the meeting.
(44) My *uncle* will *remain until* the man comes.
(23) *Forty* members of the *fourth company* will drill.
(9) The *judge knew* the *chief* of *police* was there.
(52) The *whole address* was tiresome.
(23) The *comfort* of our *friend* is to be considered.
(7) A *perfect figure* was drawn.
(33) *During* the month of *August* we *elect* a teacher.
(17) The *navy* will go *farther* away.
(45) A *board* from the *shed* is needed.
(15) The house was *between* the *jail* and the store.
(58) I am *getting* the *second* order.
(26) The *station* is *worth* more money.
(57) *Madam* will return *Thursday* morning.
(32) We *don't request* attendance.
(60) What is the *objection* to a *personal* letter?
(41) A *sudden change* in the *weather* will come soon.
(25) *Duty* before *pleasure* is an old saying.
(2) *Eight* men *intend* to *retire* from the house.
(42) It would be *proper* to call.

When the second hand reaches 7, stop the work.

[12] Monroe, DeVoss, and Kelly, *op. cit.*, p. 217.

[13] Only 49 words are italicized in the source from which this test is taken. To provide the desired number, the word "retire," belonging to Column O of the Ayres Scale, has been placed in italics.

The words on which the pupils are to be scored are indicated in italics. The number in parentheses before each sentence is for the purpose of guiding the rate of dictation. For example, the teacher starts reading the first sentence when the second hand of her watch is at 60. When it is at 27, she starts reading the second sentence, and so on.

The popularity of this type of test has been limited, because of difficulties in construction and administration. Moreover, it is evident that if the rate of dictation in a grade is determined by the standard rate of writing for that grade, the dictation will be too rapid for half of the pupils, if the handwriting achievement of the grade is normal, and for more than half, if the handwriting achievement is below normal. Then, too, in the directions for the test the pupils are requested to stop writing a sentence when the teacher begins the following one, which is at best a doubtful proceeding. The crucial words are supposed to be placed some distance from the ends of sentences, so that they will not be included among the words omitted for lack of time. After all, a test that requires a rate of writing too rapid for one-half the class and too slow for the other half has not solved the problem of providing a natural setting for the testing of spelling ability.

Limitations of Standard Tests

The teacher should note carefully that standardized tests have a limited usefulness. They tell her what the performance of the children should be in

advance of specific instruction on a list of words, many of which may never have been studied. They do not, however, tell her how accurately her pupils should spell the words which she has been teaching. In fact, drill on scale words invalidates them for use with the scale standards. Ayres[14] touches this point in his final words descriptive of his scale. He says: "In proportion as these lists are used for the purposes of classroom drill, the scale will become untrustworthy as a measuring instrument." In other words, the Ayres standards do not apply in a school that has made the Ayres list a definite portion of its course of study.

This situation leads naturally to the question, What is the best method of testing the efficiency of the spelling *instruction* in a given room? To this question the answer seems quite simple: Test the pupils on the words that they have been *taught*. The standardized material will enable one to determine ability in advance of instruction, but only a test based on the words taught can determine the success of the teaching. This means that, in spite of the vast amount of energy that has been expended in the construction of standard measuring instruments, schools are still left with the job of constructing tests—examinations, if you will—that fit more accurately their immediate needs. The score aimed at on such school examinations is 100 per cent. This aim is similar to that set up for efficiency in the minimal-essential calculation of arithmetic. It would be fairer to pupils and teachers to provide

[14] *A Measuring Scale for Ability in Spelling*, pp. 40–41.

them with end or after-teaching tests, the standards for which would show what is humanly possible—what degree of perfection has been achieved, and is therefore achievable, in good schools. Every school system could work out standards of this kind for itself. Where, however, a scientifically constructed course is employed, it would be better if the authors of the course prepared standards of this kind, based on the results of teaching in a sufficiently large number of representative school systems.

CHAPTER VIII

A SPELLING VOCABULARY FOR ELEMENTARY SCHOOLS

The list of 3,481 words[1] which appears at the close of this chapter was briefly described in Chapter I. It is the result of a comparative and critical study of eleven investigations of adult correspondence and five investigations of children's themes.[2] The list is now published in the hope that it may be of service to teachers, supervisors, and research workers in curriculum-making.

Size of the Spelling Vocabulary

Several investigations have shown that a vocabulary of 4,500 words will include nearly one-half of the number of words *understood* by the average pupil at the completion of the eighth grade. In a study[3] of 1,000,000 running words in adult correspondence it was found, as explained earlier (see Table III), that the 3,000 different words of highest

[1] In rechecking this list for publication, one word was added and one rejected. Adjustment of totals for different classes of words required by these two changes accounts for all variations from totals previously reported.

[2] References to these investigations are given in Chapter I.

[3] Horn, "The Curriculum for the Gifted: Some Principles and an Illustration," *Report of the Society's Committee on the Education of Gifted Children*, p. 87. Twenty-third Yearbook of the National Society for the Study of Education, Part I.

frequency accounted for 97.66 per cent of all word occurrences; 3,500 different words for 98.3 per cent; 4,000 words for 98.73 per cent; and 4,500 for 99 per cent. In the opinion of the writer, scientific makers of the curriculum should not set the total for the minimal spelling vocabulary much beyond 3,500 words. There is no justification for teaching all, or even approximately all, the words that will be used by children in their writing. The opinion seems to be sound that if instruction is to be conducted most effectively, teaching effort should be concentrated on that portion of the total vocabulary which accounts for from 98 to 99 per cent of the total number of running words which are found to be used in the writing of everyday life.

A Substitute for Frequency of Usage

In the vocabulary which concludes this chapter, two numerical values accompany each word. The first of these indicates its total frequency of usage in the eleven adult investigations previously referred to; the second, the number of childhood studies in which it appeared.

A question may arise with regard to the validity of using the number of vocabularies in which a word appears as a substitute for frequency of usage. On account of the lack of frequency data in the childhood studies, this method was taken as the next best recourse. As a matter of fact, the number of sources in which a word is found is not only the next best recourse, but also a very valuable index of the importance of a word. In two of the best

vocabulary studies made to date, Thorndike's reading vocabulary[4] and the Commonwealth spelling vocabulary,[5] this value was combined with frequency of usage to obtain the "credit numbers" by which the words in these investigations were selected.

Moreover, the two values are positively correlated. One would expect that the total frequency of a word which appears in five vocabularies would be greater than that of a word which appears in only four vocabularies, that the total frequency of a word which appears in four vocabularies would be greater than that of a word which appears in only three vocabularies, and so on. In the field of adult correspondence, where both kinds of data are available for the same words, a study was made of the relation between the total frequency of words and the number of vocabularies in which they appear. One hundred words were selected from the Ayres, Andersen, Cook and O'Shea, Houser, and Warning[6] vocabularies in such a way that (1) they sampled the full range of frequencies, (2) they represented equally each number of vocabularies from one to five, i.e., twenty words appeared in five vocabularies, twenty in four, and so on, and (3) they were, so far as possible, free from complications due to the dictionary classification of Cook and O'Shea. Otherwise, the selection was at random. These one

[4] *The Teacher's Word Book.* New York: Teachers College, Columbia University, 1921.

[5] Horn, *A Basic Writing Vocabulary: 10,000 Words Most Commonly Used in Writing.*

[6] "An Investigation of the Word Usage of Adults in Written Correspondence." Unpublished Master's thesis, Department of Education, University of Chicago, 1925.

hundred words were arranged in five equal groups, according to the number of vocabularies in which they occurred. They were then ranked according to frequency, and this list also was divided into five groups of twenty words each. When the two groupings were compared, it was found that 75 per cent of the words were in the same fifth in each list. None of the remaining 25 per cent of the words was more than one group removed in one list from its position in the other list. Altogether, therefore, we seem warranted in using the number of vocabularies in which a word appears as a fairly reliable substitute for frequency of use, and, in any case, as a good index of the importance of a word.

Composition of the Present List

If it is assumed that a vocabulary of 3,500 words is sufficiently large, as a general standard for the public schools, what words should be chosen from the group of words which is common to the usage of both children and adults? If the 240 words having frequencies of 25 or more be selected from the adult-only list, and the 211 words found in three or more childhood vocabularies be chosen from the childhood-only list, 3,049 will remain to be chosen from the common group. Since the total number of words in the common group is 4,598, the words of least importance may be eliminated. By eliminating the words having frequencies of less than 20 in the composite adult list and appearing in only one childhood vocabulary, and those having frequencies of less than 10 in the composite adult list and appearing

in only two childhood vocabularies, 3,030 words remain in the common list. These 3,030 words added to the 451 words previously suggested make a total of 3,481 words, approximately the number aimed at. To summarize, the final list thus constructed consists of the following:

1. Words used by children only and appearing in three or more childhood vocabularies		211
2. Words used by adults only and having frequencies of 25 or more in the composite adult list		240
3. Words used by both children and adults		
a) appearing in three or more childhood vocabularies, regardless of frequency in the composite adult list	2,297	
b) appearing in only two childhood vocabularies and having frequencies of 10 or more in the composite adult list	456	
c) appearing in only one childhood vocabulary and having frequencies of 20 or more in the composite adult list	277	3,030
Total		3,481

The decisions regarding eliminations from the common list are admittedly somewhat arbitrary. It would be difficult to determine precisely the frequency value at which a line should be drawn to separate the words that are to be included from those that are to be excluded. On the other hand, the reader will recognize that the decisions made are fairly consistent. For example, the criterion for the inclusion of childhood-only words is appearance in at least three vocabularies, but words are selected from the common list that appear in only one or two childhood vocabularies, provided there is compen-

sating support in the adult frequency data. Again, words are included from the adult-only group if they have frequencies of 25 or more, but words are accepted from the common group with frequencies of 20 or more in the adult list, provided they appear in a single childhood vocabulary.

Those who are interested in the validity of adult usage as a basis for the selection of spelling lists will no doubt want to know how a spelling vocabulary based solely on adult usage differs from one that recognizes the needs of both children and adults. The extent and the nature of the difference can be easily shown. In addition to 211 words used by children only, the childhood-adult vocabulary includes about 500 words frequently used by children but so infrequently used by adults that they would not appear in an adult-usage list. Both of these groups of words would be replaced, in a vocabulary based on adult usage, by words used rarely or not at all by children. On a basis of 3,500 words the two vocabularies would diverge to the extent of at least 700 words, or 20 per cent.

Using the List in Making Courses of Study

It may be appropriate to add a word in regard to the use of the following list in the construction of courses of study in spelling. The reader should observe that the selection of words in the list has been based entirely on frequency of usage. This is the accepted practice, and is generally regarded as valid. The validity of this principle, however, is not absolute.

A little reflection will show that material for a course of study should be selected not only on the basis of satisfactory frequency of usage, but also on the basis of correct standards of usage. To illustrate, such words as *cute* and *dandy, kid* and *kids, pa* and *ma,* all have satisfied the frequency requirements, and therefore appear in this published list, but none of these words, in the sense in which it is ordinarily employed, has the sanction of good usage in written discourse. Again, two spellings for a number of words appear in the list; for example, *catalog* and *catalogue, good-by* and *good-bye, theater* and *theatre.* Since most persons do not need to be able to spell a word in more than a single acceptable way, it seems wise in cases like these to include only one form—that preferred by authorities on good usage. Incidentally, it is interesting to note that the first-mentioned word in each of the above pairs is now preferred by the populace, as indicated by its greater frequency. The frequency principle provides a cross section of social practice, which, as a standard, is subject to the imperfections, as well as the transiency, of many social usages.

With facts like these in mind, discriminating workers in the field of the curriculum will carefully examine a list based entirely on frequency of usage for violations of good diction. The writer has preferred to adhere strictly to the frequency principle and leave the problem of good usage to the course-maker. Although it is contrary to the practice of some of the leading experts, a limited number of eliminations certainly should be made, since it is the function of spelling to train for correct usage.

The Vocabulary

The first numerical value following a word indicates its frequency in the adult composite list; the second, the number of childhood investigations in which it appeared.

a	3308	0	acquainted	56	2
ability	34	2	acre	185	3
able	485	5	across	88	5
aboard	0	3	act	106	5
about	2682	4	action	65	2
above	231	4	active	38	1
abroad	15	2	actual	25	0
absence	69	2	actually	27	1
absent	18	4	add	120	5
absolutely	60	1	added	42	0
abstract	52	0	addition	52	1
abundant	4	3	additional	90	1
accept	177	4	address	295	5
acceptance	21	2	addressed	103	0
accident	28	5	administration	37	0
accommodate	18	2	admire	8	3
accomplish	39	1	admission	13	3
accordance	45	0	adopted	19	2
according	71	1	advance	124	2
accordingly	33	0	advanced	51	0
account	908	5	advantage	207	3
accounts	44	0	adventure	7	4
ache	40	2	advertise	30	5
acknowledge	110	2	advertisement	29	3
acorn	0	3	advertising	59	1
acquaintance	22	2	advice	97	3

advisable	36	0	almonds	21	1
advise	268	2	almost	398	5
advised	49	0	alone	179	5
advising	41	1	along	408	5
affair	66	4	already	220	5
affectionately	31	1	also	1221	5
afford	29	5	although	188	5
afraid	189	5	altogether	17	3
after	1207	5	always	542	5
afternoon	666	5	am	2701	2
afterward	29	3	ambition	13	2
again	1010	5	ambulance	0	3
against	178	5	ammunition	1	3
age	97	5	among	113	5
agency	63	0	amount	362	5
agent	153	3	amounting	37	0
ago	503	5	ample	28	0
agree	66	4	amusement	4	3
agreeable	17	3	an	2054	3
agreed	10	3	analysis	95	0
agriculture	71	4	analyze	13	2
ahead	77	5	and	27248	4
aid	67	3	anger	0	3
aim	36	2	angry	8	4
air	62	4	animal	28	4
alarm	7	4	ankle	11	2
alfalfa	91	1	anniversary	12	2
alike	5	3	announce	16	2
alive	18	4	announcement	17	3
all	4802	5	annual	73	2
allow	98	5	another	516	5
allowed	28	2	answer	456	4
all right	73	2	answered	53	2

answering	143	0	arm	112	4
anxious	170	5	army	62	4
any	2675	5	arose	0	3
anybody	31	3	around	415	5
anyhow	34	1	arouse	1	3
anyone	148	4	arrange	108	3
anything	533	5	arranged	24	1
anyway	119	5	arrangement	68	3
anywhere	43	5	arrest	4	3
apart	15	3	arrival	30	2
appeal	36	0	arrive	141	5
appear	73	4	arrived	111	2
appearance	18	4	arriving	23	1
appeared	26	1	arrow	0	3
apple	67	5	art	59	0
application	165	1	article	122	3
applied	16	2	artificial	1	3
apply	45	3	artist	10	2
appoint	32	4	as	6475	2
appointment	19	2	ashamed	26	3
appreciate	374	3	ashes	0	4
appreciated	55	0	aside	37	2
appreciation	44	2	ask	573	5
approach	10	3	asked	188	3
approval	38	1	asking	74	2
apricot	13	2	asleep	32	5
April	156	3	assist	59	1
apron	18	5	assistance	44	3
are	6163	4	assistant	40	0
aren't	24	1	association	148	2
argument	23	2	Asst.	32	0
arise	25	2	assume	22	1
arithmetic	3	5	assure	164	2

assured	26	1	awful	253	5
assuring	74	0	awfully	109	1
astonish	0	4	awhile	39	5
at	6097	2	ax	0	3
ate	23	4			
attached	25	1	babies	3	3
attack	19	5	baby	205	5
attacked	5	4	back	946	5
attempt	34	4	bacon	11	2
attend	145	5	bad	491	5
attendance	22	3	badge	0	3
attended	33	0	badly	66	2
attention	454	5	bag	15	4
attic	7	3	baggage	6	3
attorney	37	1	bags	27	0
attract	1	3	bake	61	3
attraction	17	2	baked	3	3
attractive	16	3	baker	9	3
August	107	3	baking	10	3
aunt	328	5	balance	182	2
author	13	3	bale	1	4
auto	77	1	ball	119	5
automobile	122	5	balloon	0	3
autumn	2	4	ballot	22	1
avail	67	0	banana	2	4
available	47	0	band	56	5
avenue	52	5	bandage	0	4
average	66	2	bang	1	3
avoid	16	3	bank	619	5
await	30	2	banker	25	0
awaiting	89	0	banking	299	0
awake	12	4	banks	68	0
away	394	4	banner	0	3

banquet	31	3	became	36	3
bare	13	4	because	768	4
bargain	20	5	become	136	5
bark	9	5	bed	375	5
barked	0	3	bedroom	17	3
barking	0	3	bee	17	3
barley	37	2	beef	20	2
barn	45	5	been	2315	4
barrel	45	4	beer	17	2
base	35	3	beet	6	3
baseball	20	4	before	1278	5
basement	5	4	beg	259	5
bashful	0	3	began	74	4
basis	47	0	beggar	0	4
basket	51	5	begged	39	4
basketball	20	3	begin	207	5
bat	18	4	beginning	127	4
bath	41	4	begun	12	4
bathe	8	5	behave	5	4
bathing	0	3	behavior	2	3
battle	10	5	behind	46	5
bay	20	3	being	395	3
be	15184	3	believe	591	5
beach	18	5	believed	0	3
bead	6	4	believing	11	2
beam	0	3	bell	34	5
bean	41	4	belong	39	5
beans	32	0	below	64	5
bear	118	5	belt	24	4
beast	0	3	bend	6	5
beat	97	4	beneath	1	3
beautiful	98	5	benefit	104	3
beauty	29	3	bent	2	3

berries	1	3	blind	4	5
berry	17	3	block	90	4
beside	121	3	blood	45	3
besides	16	4	bloody	2	3
best	682	4	bloom	14	4
bet	41	2	blossom	9	5
better	636	4	blot	5	3
between	168	5	blow	51	5
beyond	23	4	blowing	2	3
bicycle	2	5	blue	152	5
bid	28	3	bluff	33	3
big	505	5	board	281	5
bigger	37	2	boat	41	5
biggest	32	2	body	69	5
bill	238	4	bog	25	0
bind	9	3	boil	18	5
bird	20	5	bone	2	5
birth	16	4	bonfire	0	5
birthday	114	4	bonnet	2	3
biscuit	8	3	book	473	5
bit	117	4	booklet	41	1
bite	77	5	border	5	3
bitter	7	3	bore	0	3
black	121	5	born	36	5
blackberries	13	2	borrow	38	2
blame	45	3	boss	19	2
blank	152	1	both	428	5
blanket	12	4	bother	53	4
blaze	2	3	bottle	37	5
bled	1	3	bottom	42	5
bleed	2	4	bought	121	4
bless	16	4	bound	3	3
blew	14	4	boundary	0	3

bouquet	3	3	brown	75	5
bow	9	4	bruise	3	4
bowl	10	4	brush	25	4
box	241	5	bucket	2	3
boxes	30	1	bud	8	4
boy	540	5	bug	3	4
boys	58	0	buggy	11	4
brain	19	2	bugs	30	0
branch	56	5	build	165	5
branches	26	1	building	127	2
brass	2	4	built	27	3
brave	10	5	bull	4	5
bread	42	5	bullet	1	4
break	85	5	bulletin	87	0
breakfast	103	5	bump	2	4
breaking	11	2	bunch	81	4
breast	2	4	bundle	7	4
breath	9	4	bureau	37	1
breathe	12	4	burglar	2	3
breeze	3	4	buried	9	4
brick	17	4	burn	49	5
bridge	32	4	burned	5	3
brief	18	2	burst	2	4
bright	40	5	bury	11	4
bring	254	5	bush	4	4
bringing	23	2	bushel	40	3
broad	9	4	business	684	5
broke	26	4	busy	479	4
broken	44	4	but	5379	4
brook	0	4	butcher	15	4
broom	1	4	butter	57	5
brother	246	5	button	56	5
brought	103	4	buy	305	4

buyer	37	0	captured	0	3
buying	53	3	car	571	4
by	2342	3	card	499	4
			care	513	5
cabbage	12	4	cared	22	2
cabin	4	5	careful	127	4
cabinet	18	2	carefully	94	2
cage	1	5	carpenter	9	4
cake	78	5	carpet	13	5
calf	29	3	carriage	7	5
call	602	5	carried	37	4
called	190	2	carrier	28	1
calling	52	3	carries	0	3
came	545	4	carrot	0	4
camel	2	3	carry	150	4
camp	34	5	carrying	38	3
campaign	62	3	cart	0	5
can	3501	5	case	290	5
canal	1	3	cash	85	1
canary	0	3	cashier	108	1
candidate	36	2	cast	25	2
candle	9	3	castle	1	3
candy	34	5	cat	16	5
cane	8	3	catalog	78	1
cannon	0	5	catalogue	25	1
cannot	638	2	catch	82	5
canoe	9	3	cattle	80	4
can't	337	3	caught	27	4
canvass	12	2	cause	138	5
cap	43	4	caused	26	1
capital	46	5	caution	0	3
captain	14	5	cave	7	4
capture	0	4	cedar	31	2

ceiling	5	4	checking	32	0
celebrate	12	3	cheer	16	5
cellar	27	3	cheerful	18	3
cement	11	2	cheese	14	5
cemetery	4	4	cherries	6	3
cent	313	5	cherry	2	5
center	42	5	chest	2	3
central	41	3	chicken	100	5
century	2	3	chief	29	5
certain	145	5	child	271	5
certainly	373	1	children	187	4
certificate	89	2	chimney	2	5
chain	32	4	chocolate	9	4
chair	69	5	choice	56	3
chairman	51	0	choir	26	2
chance	129	4	choose	36	5
change	429	5	choosing	8	3
changeable	0	3	chop	18	4
changed	65	3	chopped	0	3
changing	12	3	chopping	0	3
chapel	26	0	chose	10	4
chapter	22	1	chosen	2	4
character	63	2	Christian	24	3
charge	279	4	Christmas	243	4
charged	30	0	church	355	4
chase	5	5	cigar	16	2
chased	0	3	cigarette	0	4
chasing	1	4	circle	12	5
chauffeur	0	3	circular	91	0
Chautauqua	46	0	circulation	26	1
cheap	68	2	circumstance	22	1
cheat	2	3	circumstances	51	0
check	274	3	circus	21	5

cistern	12	2	clown	0	4
cities	25	2	club	228	4
citizen	44	4	coach	33	4
city	849	5	coal	126	5
civil	14	3	coast	30	5
civilization	2	3	coat	156	4
claim	39	1	coax	0	3
class	330	5	coffee	67	5
classes	53	0	coin	10	3
clay	5	3	cold	450	5
clean	199	5	collar	37	4
cleaned	35	2	collect	46	3
cleaning	23	2	collection	62	1
clear	150	5	college	222	5
clerk	54	5	colonel	1	3
client	40	0	colony	0	4
climate	28	4	color	102	5
climb	6	5	colored	22	2
climbed	3	3	colt	10	4
cloak	0	3	column	10	2
clock	37	5	comb	11	5
close	497	4	combination	26	1
closed	37	3	come	2154	5
closely	24	1	comes	41	0
closet	20	2	comfort	42	5
closing	15	2	comfortable	39	3
cloth	47	4	coming	414	4
clothe	103	2	command	4	5
clothes	27	4	commence	26	1
clothing	11	3	commerce	19	2
cloud	6	4	commercial	53	3
cloudy	19	3	commission	88	2
clover	1	4	committee	135	3

common	70	4	considered	56	1
communication	57	0	consist	25	1
community	42	0	constitution	11	2
companies	14	2	contain	60	5
companion	11	4	contained	17	2
company	533	5	contemplate	39	0
compare	19	5	contemplating	31	0
compel	8	3	content	46	3
compelled	10	2	contents	49	0
complete	86	4	contest	85	3
completely	33	1	continually	6	3
compliment	24	3	continue	92	4
composition	11	4	continued	32	3
concern	54	2	contract	103	1
concerning	85	0	contrary	10	2
condition	260	3	control	26	3
conditions	59	0	convenience	67	2
conduct	31	2	convenient	66	4
conductor	6	5	convention	40	1
conference	25	0	conversation	27	3
confidence	49	0	cook	77	5
confident	29	0	cooked	4	3
connect	28	3	cooking	16	3
connected	22	1	cool	76	4
connection	165	1	coöperation	45	0
connections	149	0	copies	63	1
conquered	1	3	copper	3	3
consent	11	5	copy	187	2
consequently	28	1	cord	12	3
consider	207	3	cordially	63	1
considerable	97	2	corn	205	5
considerably	32	1	corner	37	5
consideration	101	1	corporation	26	1

correct	76	2	credit	166	1
correspond	22	1	creek	1	3
correspondence	52	0	creep	5	4
correspondent	25	0	crept	0	3
cost	290	4	cried	2	4
cottage	22	5	crime	25	1
cotton	30	5	criminal	21	1
cough	48	3	cripple	1	3
could	843	4	criticism	12	2
couldn't	123	4	crochet	23	1
council	45	2	crop	131	2
count	86	5	cross	85	4
countries	16	2	crossing	1	3
country	359	5	crotch	0	3
county	146	3	crow	2	3
couple	153	5	crowd	66	5
courage	16	5	crown	6	3
course	608	3	cruel	5	5
court	59	5	crumb	0	3
courteous	41	1	crush	2	3
courtesy	51	1	crust	2	3
cousin	123	5	cry	74	5
cover	187	4	cucumber	2	3
covered	36	3	cultivate	15	2
covering	77	0	culture	50	0
cow	51	5	cunning	0	3
crack	7	5	cup	26	5
cracker	5	3	cupboard	8	4
cradle	0	3	cure	27	2
crash	1	4	curious	0	4
crawl	4	5	curl	0	5
crazy	82	5	curly	6	3
cream	65	5	current	13	2

curtain	59	3	dear	3509	5
curve	0	4	dearest	67	0
cushion	10	2	death	111	4
custom	12	4	debate	33	1
customer	149	3	debt	16	3
cut	216	5	Dec.	44	0
cute	40	4	December	179	3
cutting	28	4	decide	175	5
			decided	110	1
dad	36	0	decision	23	3
daddy	40	1	declaration	1	3
daily	85	4	decorate	3	4
dairy	35	3	deed	47	2
damage	27	5	deep	44	5
damp	10	4	deer	2	5
dance	155	5	defeat	11	5
danced	6	3	defend	2	3
dancing	24	3	definite	56	1
dandy	70	2	degree	48	1
danger	43	5	delay	120	1
dangerous	12	4	delayed	25	1
dare	25	3	delight	10	2
dark	76	5	delighted	22	3
darling	71	3	delightful	47	3
date	455	3	deliver	41	4
dated	33	0	delivered	41	0
dates	26	0	delivery	128	2
daughter	68	5	demand	87	0
day	2334	5	democrat	49	1
days	73	0	democratic	24	1
dead	76	4	dentist	22	4
deal	263	4	department	37	3
dealer	90	1	departments	26	0

depend	47	2	dining	2	3
deposit	56	1	dinner	376	5
depot	72	5	direct	130	5
depth	0	3	direction	78	3
describe	10	3	directly	49	0
description	58	1	director	51	0
desert	6	4	directory	28	0
deserve	23	3	dirt	20	4
design	41	3	dirty	44	3
desire	264	3	disappear	2	4
desired	44	0	disappoint	45	3
desk	15	5	disappointed	31	1
despise	0	3	disappointment	10	2
destroy	29	4	discount	59	0
destroyed	10	3	discourage	19	2
detail	57	0	discover	4	3
detective	1	3	discovered	12	3
determined	1	3	discuss	15	2
develop	45	1	disease	38	4
diamond	2	4	dish	34	5
dictionary	4	3	display	19	2
did	957	4	dispute	3	3
didn't	423	3	distance	17	5
die	60	5	distribute	17	3
died	63	4	distribution	30	1
difference	93	4	district	95	3
different	214	5	disturb	8	3
difficult	32	3	ditch	6	5
difficulty	34	1	dive	0	5
dig	12	5	divide	17	5
digging	0	4	division	27	2
dim	1	3	do	4914	3
dime	1	5	dock	1	3

doctor	324	5	dressed	14	3
dodge	5	3	dressing	6	3
does	362	4	drew	9	4
doesn't	88	4	dried	1	3
dog	51	5	drift	9	3
doing	359	4	drifted	0	3
doll	11	5	drill	22	5
dollar	223	5	drink	21	5
domestic	36	1	drinking	0	3
done	408	4	drive	110	5
donkey	0	4	driven	1	3
don't	1143	4	driving	10	4
door	246	5	drop	119	5
dose	13	2	dropped	6	4
double	20	5	drove	2	4
doubt	158	2	drown	3	5
doubtless	28	0	drowned	1	3
down	1106	5	drug	25	3
dozen	82	5	drum	17	5
Dr.	53	0	drunk	1	4
draft	114	0	dry	71	4
drag	5	3	duck	2	5
drank	3	4	due	222	4
draw	36	5	dug	2	4
drawer	25	3	dull	8	3
drawing	8	3	duly	41	1
drawn	8	3	dump	0	3
dread	21	2	duplicate	38	0
dreadful	24	1	during	396	5
dream	35	5	dust	46	5
dreamed	4	3	duty	76	4
dreaming	1	3	dying	1	3
dress	286	5			

each	569	5	eleven	41	4
eager	6	3	else	224	5
eagle	0	3	employ	14	2
ear	19	4	employee	21	1
earliest	57	2	empty	5	5
early	301	5	enclose	312	1
earn	13	5	enclosed	392	1
earnest	22	1	enclosing	198	0
earth	32	5	encourage	15	2
easier	5	3	end	283	5
easily	63	4	endure	3	3
east	90	3	enemies	0	3
eastern	28	3	enemy	6	5
easy	92	5	engaged	12	2
eat	232	4	engine	13	5
eaten	0	3	engineer	22	4
eating	11	3	English	47	3
edge	29	5	enjoy	262	5
education	87	4	enjoyed	79	1
effect	85	3	enjoying	50	1
efficiency	40	0	enough	444	5
efficient	34	1	enter	56	3
effort	118	4	entered	18	3
egg	64	4	entertain	28	3
eight	155	4	entertainment	20	2
eighteen	26	3	entire	75	1
eighty	20	3	entirely	130	3
either	222	4	entitled	41	1
elect	26	2	entrance	0	3
election	94	2	envelope	76	1
electric	12	5	equal	20	3
electricity	10	3	equally	10	2
elephant	0	5	equipment	42	1

equipped	34	1	excuse	102	4
errand	42	3	exercise	58	4
error	46	1	exercised	31	1
escape	8	5	exhibit	27	2
especially	172	3	expect	242	5
establish	29	1	expected	90	1
established	20	1	expecting	27	0
esteemed	38	0	expense	164	5
etc.	77	0	expensive	45	3
eve	62	0	experience	131	5
even	583	5	expert	20	1
evening	376	4	explain	68	4
event	18	2	explained	25	1
ever	677	5	explanation	17	2
evergreen	0	3	explore	0	3
every	1005	5	export	56	0
everybody	100	5	express	194	4
everyone	39	3	expression	20	1
everything	295	4	extend	67	2
everywhere	10	2	extended	27	1
exact	32	0	extension	37	0
exactly	44	2	extent	43	0
examination	111	2	extra	155	2
examine	28	5	extremely	13	2
example	16	2	eye	124	5
excellent	75	4			
except	192	5	face	113	5
exception	29	1	facilities	128	0
exchange	81	2	fact	297	3
excite	2	4	factory	107	5
excitement	33	2	fail	73	4
exciting	23	3	failed	35	3
excursion	13	4	failure	20	3

faint	2	3	feature	34	2
fair	206	5	Feb.	73	0
fairly	55	2	February	60	3
fairy	0	3	fed	9	3
faithful	6	3	fee	89	1
fall	263	5	feed	95	4
falling	5	3	feeding	12	3
false	6	3	feel	928	5
familiar	26	3	feeling	135	3
family	272	5	feet	61	4
famous	18	4	fell	73	4
fancy	32	0	fellow	185	4
far	311	5	felt	79	4
fare	31	3	fence	20	5
farm	269	5	fern	6	3
farmer	145	3	ferry	7	3
farming	50	1	fertile	0	3
farther	15	4	festival	3	3
fashion	25	3	fever	67	4
fast	75	5	few	724	5
fasten	5	3	field	72	5
fastened	0	3	fierce	19	4
fat	94	4	fifteen	102	4
father	276	5	fifth	29	4
fault	41	3	fifty	97	4
favor	687	4	fight	74	4
favorable	58	2	fighting	1	3
favorably	23	1	figure	83	4
favored	26	0	file	90	1
favorite	15	4	filed	20	1
fear	69	5	fill	184	5
feast	4	4	filled	61	3
feather	5	4	filling	39	2

film	26	0	flour	30	4
final	30	2	flower	50	5
finally	54	3	flutter	1	3
financial	59	0	fly	34	5
find	939	5	flying	1	3
finding	19	2	folk	317	2
fine	624	5	folks	60	1
finger	39	4	follow	168	4
finish	237	4	following	122	2
finished	78	4	fond	7	5
fire	167	5	food	96	5
fireman	7	3	fool	22	2
firm	89	1	foolish	27	4
first	888	4	foot	102	5
fish	30	5	football	88	4
fishing	13	2	for	10715	4
fit	98	3	force	67	4
five	419	4	forced	17	2
fix	100	4	fore	5	3
fixed	34	3	foreign	116	4
fixing	4	4	forenoon	135	2
flag	10	5	forest	7	5
flake	0	3	forget	191	5
flame	2	3	forgive	36	1
flash	0	3	forgot	54	3
flat	46	4	forgotten	45	3
fled	0	3	fork	2	4
flew	1	4	form	133	5
flies	0	3	former	44	1
float	1	3	formula	31	0
flock	2	4	fort	16	5
flood	1	4	forth	19	4
floor	83	5	fortunate	52	2

fortune	22	3	fruit	100	5
forty	66	4	fry	13	2
forward	170	4	full	112	4
forwarded	51	0	fully	114	3
fought	5	4	fun	134	5
foul	1	3	fund	42	0
found	227	4	funeral	26	4
foundation	32	2	funny	82	4
fountain	2	4	fur	103	3
four	445	4	furnace	31	2
fourteen	18	4	furnish	147	2
fourth	60	4	furnished	42	2
fox	1	4	furniture	40	5
frame	21	3	further	252	5
free	139	3	future	280	3
freeze	17	5			
freight	87	5	gain	52	5
French	21	2	gallon	45	1
fresh	41	5	game	276	4
Friday	207	3	garage	34	4
fried	1	3	garden	56	5
friend	687	5	garment	36	0
friendly	25	2	gas	48	2
friends	37	0	gasoline	26	5
fright	1	3	gate	30	4
frighten	15	4	gather	31	4
frightened	15	3	gave	256	3
frog	0	4	gay	12	2
from	3691	4	geese	0	4
front	94	5	general	183	5
frost	23	3	generally	45	3
froze	11	3	generous	11	2
frozen	7	4	gentle	5	4

gentleman	49	3	government	69	5
gentlemen	786	2	governor	7	3
genuine	13	2	gown	25	3
geography	16	3	grab	3	3
get	3838	5	grabbed	0	3
getting	458	3	grade	211	5
ghost	10	4	gradually	10	3
giant	0	5	graduate	53	4
gift	82	2	grain	68	5
girl	916	5	grammar	11	5
girls	127	0	grand	76	4
give	1243	5	grandfather	7	4
given	233	4	grandma	82	4
giving	22	2	grandmother	6	4
glad	1177	5	grandpa	15	3
gladly	48	0	grape	15	3
glass	87	5	grapes	28	2
gloomy	10	2	grass	57	5
glorious	36	2	grateful	26	1
glove	23	3	grave	11	3
go	3089	4	gravy	15	3
goat	7	5	gray	37	4
goes	32	4	grazing	0	3
going	999	4	great	658	5
gold	94	5	greater	29	1
gone	241	4	greatest	27	2
good	2757	5	greatly	92	2
good-by	59	3	green	62	5
good-bye	27	2	greeting	25	0
good night	41	0	grew	29	4
goose	13	5	grieve	3	3
got	874	4	grind	42	4
gotten	33	3	grinding	0	3

grip	34	1	half	339	5
grippe	20	1	hall	57	5
grizzly	0	3	hammer	5	5
groceries	1	4	hand	455	5
grocery	27	3	handed	32	1
ground	81	4	handful	0	4
group	20	4	handkerchief	38	5
grove	37	3	handle	128	4
grow	135	5	handling	58	2
grower	35	0	hands	26	0
growing	40	2	handsome	19	3
growl	0	4	handy	31	2
grown	23	4	hang	59	5
growth	23	2	happen	115	4
guarantee	24	1	happened	46	2
guaranteed	30	0	happiness	39	0
guard	10	4	happy	406	5
guardian	1	3	harbor	1	5
guess	425	5	hard	491	5
guessed	27	1	hardly	210	3
guest	25	5	harvest	18	3
guide	19	3	has	2060	3
guilty	7	3	hasn't	39	1
gulf	0	4	haste	19	4
gun	13	4	hat	113	5
gutter	0	4	hatch	0	3
			hatched	0	3
ha	51	0	hatchet	1	3
habit	52	2	hate	61	4
had	2940	4	hated	5	3
hadn't	43	2	haul	7	3
hail	0	3	have	11365	3
hair	98	5	haven't	297	2

having	435	4	hero	2	4
hawk	0	3	herself	62	5
hay	51	5	hid	1	4
hazel	0	3	hide	12	4
he	3280	3	hiding	0	3
head	187	4	high	446	4
headache	32	0	higher	38	2
health	94	2	highest	53	2
healthy	19	3	highly	26	0
heap	14	3	hill	44	5
hear	1023	5	him	1382	4
heard	300	4	himself	77	3
hearing	29	4	hind	0	3
heart	76	5	hinge	2	3
heat	79	5	hire	19	3
heaven	5	3	his	1342	3
heavy	210	5	history	93	5
heel	4	4	hit	27	5
height	9	3	hitch	0	3
held	86	4	hitched	0	3
hello	69	4	hog	66	3
help	628	5	hogs	31	0
helped	39	3	hold	259	5
helpful	29	2	holder	28	1
helping	26	3	holding	35	2
hen	16	5	hole	38	4
hence	30	0	holiday	66	5
her	2219	4	hollow	3	3
herald	35	0	holy	3	3
herd	2	3	home	1543	5
here	2045	5	homely	4	3
hereafter	12	2	homesick	38	1
herewith	220	0	honest	38	3

honestly	21	1	hurt	95	5
honey	11	3	husband	55	4
honor	35	5	hymn	5	4
honorable	13	2			
hood	3	3	I	7175	2
hook	6	4	ice	50	4
hoop	1	4	I'd	121	0
hope	521	4	idea	156	5
hoping	192	3	ideal	25	1
hopping	0	3	idle	4	4
horn	5	5	if	4900	3
horrid	6	3	ill	57	5
horse	106	5	I'll	198	1
hose	4	4	illness	17	2
hospital	81	5	illustrate	10	2
hot	167	4	I'm	370	0
hotel	138	4	imagine	133	5
hour	294	5	immediate	54	2
hours	25	0	immediately	106	3
house	884	5	immense	13	3
how	1505	4	import	10	3
however	464	4	importance	50	3
hug	34	2	important	87	5
huge	2	3	impossible	98	2
human	25	0	impression	20	1
hundred	136	4	improve	39	3
hung	1	4	improved	29	2
hungry	13	5	improvement	53	1
hunt	25	5	in	13915	3
hunting	17	3	inasmuch	31	0
hurried	5	4	inch	27	5
hurriedly	1	3	inches	53	2
hurry	88	5	inclose	19	2

inclosed	31	1	instruction	59	2
include	60	1	instrument	11	2
including	28	0	insurance	138	1
increase	73	4	intend	104	4
increased	54	0	intended	42	1
increasing	28	1	intention	28	4
indeed	86	5	interest	564	4
independence	2	3	interested	220	3
independent	24	3	interesting	64	2
Indian	0	5	interfere	12	2
indicate	27	0	into	463	5
individual	33	0	invent	0	3
industry	26	4	invention	0	3
influence	33	1	investigate	30	2
inform	79	1	investigation	27	0
information	412	2	investment	27	1
informed	41	0	invitation	188	4
injure	2	3	invite	61	5
injured	0	4	invited	35	1
injury	4	3	inviting	30	0
ink	27	3	invoice	39	0
inquire	71	1	iron	113	5
inquiry	60	1	ironing	12	2
insect	0	5	irrigate	28	2
inside	41	5	irrigation	29	2
insist	40	1	is	7392	2
inspect	28	1	island	8	5
inst.	244	0	isn't	169	4
instance	31	1	issue	125	3
instant	88	2	issued	30	0
instead	146	5	it	10904	2
institute	38	1	item	81	0
institution	109	0	its	366	3

it's	143	0	justified	24	1
itself	56	2	justify	34	1
I've	119	0			
			keen	14	2
jacket	1	3	keep	664	4
jail	1	5	keeping	46	2
Jan.	54	0	kept	102	4
janitor	18	3	kettle	1	4
January	232	3	key	7	3
jar	13	3	kick	8	4
jealous	23	3	kid	117	1
jelly	21	4	kids	36	0
jewel	3	3	kill	44	5
jewelry	0	4	killed	20	3
job	189	3	kind	809	5
join	77	3	kindergarten	7	3
joined	18	2	kindest	46	0
joke	27	3	kindly	544	2
jolly	4	5	kindness	48	3
journal	34	2	king	21	5
journey	13	5	kiss	96	4
joy	35	2	kissed	2	3
judge	92	5	kitchen	75	5
judgment	49	2	kite	0	5
juice	5	3	kitten	12	5
July	163	3	knee	22	5
jump	26	4	knelt	0	3
jumped	5	3	knew	1122	4
jumping	1	4	knife	3	5
June	129	3	knitting	0	3
junior	22	2	knock	14	5
jury	14	2	knot	11	4
just	2360	5	know	2582	5

knowing	21	2	law	126	1
knowledge	48	3	lawn	17	4
known	94	2	lawyer	6	4
			lay	74	3
labor	66	2	lazy	15	4
lace	44	2	lead	44	5
lack	30	3	leader	42	1
ladder	3	4	leading	12	3
ladies	48	3	leaf	15	3
lading	36	0	league	64	1
lady	125	5	lean	5	3
laid	21	2	leap	0	3
lake	57	4	learn	201	5
lamb	11	2	learned	30	3
lame	15	2	learning	15	3
lamp	10	4	least	166	4
land	406	4	leather	28	2
language	23	3	leave	588	5
lantern	3	3	leaves	27	2
lap	17	2	leaving	45	2
large	351	4	lecture	66	2
larger	41	1	led	11	3
largest	47	1	left	258	3
last	1629	4	leg	30	5
late	265	4	leisure	10	2
lately	82	2	lemon	17	4
later	174	2	length	53	4
latest	36	0	less	124	4
latter	51	2	lesson	79	5
laugh	101	4	let	913	5
laughed	9	3	letter	3075	5
laughing	3	3	letters	83	0
laundry	24	2	letting	15	3

lettuce	11	4	livery	0	3
level	19	5	lives	31	2
liberal	35	1	living	62	3
liberty	43	4	load	64	4
library	68	4	loaded	9	3
lick	2	4	loaf	4	4
lie	48	4	loan	93	1
lieutenant	26	1	local	121	2
life	263	4	locate	34	2
lift	19	4	located	30	1
light	182	5	location	95	2
lightning	0	3	lock	16	5
like	1728	5	locket	0	3
liked	50	2	lodge	32	2
likely	53	0	log	3	3
lilies	0	3	lone	21	1
lily	2	4	lonely	24	2
limb	12	3	lonesome	97	5
lime	9	3	long	827	5
limit	41	0	longer	73	2
limited	39	0	longest	24	1
limp	3	3	look	807	5
line	184	5	looked	76	3
linen	24	1	looking	160	3
lines	53	1	looks	28	1
lion	1	5	loose	40	5
list	267	2	lose	128	5
listen	31	5	losing	9	3
literature	78	1	loss	64	2
little	1586	5	lost	111	4
live	295	5	lot	473	5
lived	26	2	lots	87	0
lively	16	3	loud	11	5

love	1069	5	mamma	103	2
loved	12	2	man	607	5
lovely	141	4	manage	47	5
loving	24	4	manager	112	1
lovingly	70	0	manner	64	1
low	126	4	manual	18	2
lower	31	2	manufacture	50	4
lowest	22	1	many	1010	5
luck	59	2	map	17	3
lucky	12	3	mar	27	0
lumber	52	5	marble	3	4
lump	13	2	March	93	4
lunch	91	5	march	2	4
lung	28	1	marched	0	3
lying	8	4	marching	1	3
			mark	63	4
ma	128	0	marked	3	3
machine	127	5	market	247	5
machinery	19	4	married	103	4
mad	58	4	marry	86	5
madam	88	2	mask	0	4
made	774	4	mass	19	2
magazine	72	4	master	27	5
maid	17	4	match	35	5
mail	521	4	mate	15	4
mailed	79	0	material	178	4
mailing	55	0	matter	805	4
main	43	4	matters	30	0
maintain	23	1	May	88	3
majority	28	1	may	1311	4
make	1904	5	maybe	139	5
making	373	4	me	4484	3
mama	192	2	meadow	2	3

meal	67	5	mighty	85	4
mean	343	5	mild	4	3
means	30	1	mile	78	5
meant	27	4	miles	27	0
meantime	50	1	military	21	2
measure	58	4	milk	142	5
meat	46	5	mill	37	5
medal	1	3	million	37	3
medical	26	1	mind	297	5
medicine	44	5	mine	163	4
meet	381	4	mineral	0	3
meeting	270	2	mining	2	3
melt	8	4	minister	33	2
member	173	5	mint	1	3
men	344	4	minute	179	5
mend	50	4	minutes	32	1
mention	94	3	mischief	0	3
mentioned	63	0	Miss	141	3
merchandise	31	1	miss	162	4
merchant	4	5	missed	53	3
merely	35	2	mist	1	3
merit	26	0	mistake	69	4
merry	30	5	mistress	1	4
mess	11	2	mix	12	4
message	28	3	mixed	1	4
met	86	2	model	49	2
metal	1	3	modern	30	2
method	55	0	moisture	16	3
mice	1	4	molasses	0	3
middle	88	5	moment	83	5
midnight	4	5	Monday	212	3
midst	4	3	money	546	5
might	363	4	monkey	3	5

month	544	5	name	573	5
monthly	49	0	named	19	2
months	41	0	nap	30	0
moon	68	5	narrow	17	4
moral	25	3	nation	50	4
more	1106	4	national	118	3
morning	985	5	native	4	3
mortgage	86	1	natural	45	3
mosquito	0	3	naturally	45	2
most	526	4	nature	58	5
mostly	46	2	naughty	5	4
mother	678	5	navy	15	2
mount	1	3	near	301	5
mountain	46	5	nearly	183	4
mouse	5	5	neat	16	4
mouth	36	5	necessary	269	5
move	145	5	necessity	40	1
moved	44	3	neck	68	5
movement	30	1	necktie	4	3
moving	24	4	need	540	5
Mr.	590	1	needed	34	2
Mrs.	227	1	needle	10	4
much	2292	5	needs	25	0
mud	30	5	neglect	19	2
muddy	6	4	neglected	28	1
mule	0	4	negro	12	4
museum	10	4	neighbor	84	5
music	89	5	neighborhood	19	2
must	1049	5	neighboring	0	3
my	3998	1	neither	59	4
myself	233	5	nephew	9	4
			nerve	33	2
nail	5	4	nervous	35	3

nest	1	5	noticed	21	2
net	76	2	notify	39	0
never	695	4	notion	21	2
new	1002	5	Nov.	53	0
news	210	1	November	178	3
newspaper	61	3	now	2071	5
next	960	4	number	453	5
nice	701	5	numerous	11	3
nicely	79	3	nurse	53	5
nickel	7	5	nut	20	4
niece	24	4			
night	1267	5	oak	1	5
nine	110	4	oatmeal	3	3
nineteen	23	4	oats	27	2
ninety	24	4	obedient	0	3
ninth	15	4	obey	1	5
no	1474	3	object	34	5
noble	0	5	obligation	43	1
nobody	15	5	oblige	141	2
noise	30	5	obliged	40	1
none	106	5	obtain	64	4
nonsense	3	3	obtained	16	2
noon	164	5	occasion	103	4
nor	61	4	occasionally	24	3
normal	57	2	occupant	4	3
north	203	4	occupation	3	3
northern	14	3	occupied	11	3
nose	50	5	occupy	17	4
not	6850	4	occur	12	2
note	467	5	occurred	9	4
noted	58	1	ocean	16	4
nothing	341	5	o'clock	296	5
notice	145	4	Oct.	67	0

October	126	2	orchard	44	5
odd	16	2	orchestra	15	2
odor	1	4	order	870	5
of	17448	3	ordered	77	1
off	508	3	ordinary	30	2
offer	217	4	organ	19	3
offered	64	2	organization	81	1
offering	46	0	organize	25	2
office	375	4	original	35	1
officer	49	2	ornament	0	3
official	52	0	orphan	0	4
often	125	5	ostrich	0	3
oh	149	2	other	1307	4
oil	69	3	otherwise	56	0
old	681	5	ought	198	5
older	78	2	our	3711	4
oldest	13	2	ours	196	1
olives	30	0	ourselves	177	5
on	5265	3	out	2191	3
once	579	5	outfit	22	1
one	3491	4	outside	79	4
onion	0	5	oven	11	3
only	1289	5	over	1343	5
open	344	5	overcoat	14	2
opened	30	3	owe	77	0
opening	155	2	owing	29	1
opera	19	3	own	489	5
operation	60	1	owned	14	3
opinion	71	4	owner	69	2
opportunity	196	3	oyster	4	4
opposite	13	5			
or	2600	2	pa	156	0
orange	61	5	pack	46	3

package	91	5	past	225	4
packing	11	2	paste	2	3
page	85	4	pasture	3	4
paid	51	4	pat	0	3
pail	16	4	patch	22	4
pain	33	4	patent	20	1
paint	71	5	path	4	4
painted	10	3	patience	4	3
painting	26	2	patient	50	2
pair	108	5	pattern	63	5
palace	1	5	pave	5	3
palm	2	4	pavement	8	3
pan	19	4	paw	0	3
pantry	4	3	pay	510	3
papa	127	4	payable	27	1
paper	529	5	paying	61	2
parade	5	5	payment	124	3
parcel	52	3	peace	103	3
pardon	28	3	peach	23	3
parent	24	4	peaches	24	2
park	57	5	peal	1	3
parlor	44	5	peanut	3	5
part	398	4	pear	9	4
particular	117	4	pearl	9	3
particularly	37	1	pears	25	0
parties	44	2	peas	9	3
partly	21	1	peck	6	3
partner	6	3	peculiar	5	4
party	280	5	peep	2	3
pass	133	5	pen	76	5
passed	44	3	pencil	22	5
passenger	11	5	penny	20	2
passing	13	2	people	587	4

pepper	8	3	pipe	8	4
per	348	0	pistol	1	3
per cent	20	1	pitch	4	3
perfect	64	3	pitcher	2	3
perhaps	274	4	pity	8	3
period	64	4	place	698	5
permission	14	3	placed	70	2
permit	76	4	places	22	2
person	125	5	placing	31	1
personal	104	2	plain	62	4
personally	52	0	plan	262	5
pet	5	5	plane	1	4
phone	54	2	plank	0	4
physical	22	3	planned	25	4
piano	48	5	planning	56	2
pick	63	5	plant	196	5
picked	5	3	plants	39	0
picking	12	2	plate	69	5
pickle	13	2	platform	5	3
picnic	43	5	play	308	5
picture	374	5	played	41	3
pie	63	4	playing	31	3
piece	142	3	pleasant	187	5
pierce	0	3	please	1092	5
pig	30	5	pleased	414	2
pigeon	0	4	pleasing	2	3
pile	13	4	pleasure	264	4
pillow	43	5	plenty	86	5
pin	37	5	plow	27	4
pinch	3	3	plum	26	4
pine	16	4	pocket	31	4
pink	41	5	poem	8	4
pint	10	2	point	113	5

poison	19	4	power	79	4
pole	14	5	practical	52	2
police	14	4	practically	34	0
policeman	3	3	practice	79	5
policy	95	2	prairie	5	3
polish	4	4	praise	1	4
polite	5	4	pray	6	3
political	21	1	prayed	0	3
politics	26	3	prayer	28	3
pond	4	5	preach	15	2
pony	1	5	preacher	20	3
pool	0	3	precious	3	4
poor	169	5	prefer	55	3
popular	33	4	premium	73	2
porch	47	5	prepaid	31	0
pork	8	4	preparation	42	3
position	211	4	prepare	81	4
positive	20	1	prepared	65	2
possession	18	3	presence	47	0
possibility	70	1	present	907	5
possible	467	5	president	192	4
possibly	52	2	press	43	5
post	142	4	presume	58	1
postage	29	1	prettiest	1	3
postal	68	1	pretty	588	5
post office	7	4	prevent	47	3
postscript	57	0	previous	40	1
potato	41	5	price	480	5
potatoes	51	2	prices	32	0
poultry	37	2	pride	21	2
pound	88	5	priest	3	5
pour	4	5	primary	33	0
powder	21	5	prince	0	4

principal	57	3	prospect	62	1
principle	29	3	protect	4	5
print	46	4	proud	42	4
printed	48	1	prove	81	3
prior	32	1	proved	10	2
prison	7	5	provide	44	2
prisoner	0	4	provided	27	0
private	50	3	prune	29	0
privilege	29	2	public	134	4
prize	77	2	publication	75	0
probable	14	2	publish	20	2
probably	232	3	publisher	23	1
problem	70	1	pudding	14	2
proceed	50	3	puddle	0	3
produce	58	5	pull	61	5
product	44	2	pulled	10	3
production	13	2	pulling	1	3
Prof.	33	0	pump	28	5
profession	31	3	pumpkin	4	5
professor	19	2	punish	5	4
profit	106	2	pup	1	3
profitable	27	2	pupil	76	4
program	136	4	puppy	1	4
progress	23	2	purchase	70	3
promise	99	4	purchased	40	1
promised	35	2	pure	22	5
prompt	111	2	purple	5	4
promptly	93	0	purpose	101	4
proof	37	1	purse	2	4
proper	88	4	push	9	5
properly	48	0	put	634	5
property	92	3	putting	49	3
proposition	155	0	puzzle	6	3

quality	63	2	raise	205	4
quantities	23	1	raised	14	2
quantity	29	3	raising	14	3
quarrel	9	5	rake	5	5
quarreling	0	3	ran	15	4
quart	36	2	ranch	52	3
quarter	88	4	rang	0	4
queen	18	4	range	40	2
queer	32	5	rank	8	4
question	231	5	rapid	29	2
questions	25	0	rapidly	26	1
quick	63	5	rat	2	3
quickly	28	2	rate	131	4
quiet	82	5	rather	180	5
quilt	11	2	rattle	0	3
quit	109	4	raw	38	2
quite	563	5	reach	176	5
quote	78	0	reached	60	3
			reaches	20	1
rabbit	14	5	read	452	5
race	22	5	reader	29	2
rack	17	2	readily	27	1
radish	0	4	reading	79	3
rag	14	3	ready	336	4
ragged	1	3	real	272	5
raid	1	4	realize	119	5
rail	12	2	really	330	3
railroad	67	5	reason	242	4
railway	3	3	reasonable	44	1
rain	228	5	rebel	0	3
rained	44	3	receipt	425	3
raining	20	3	receive	543	5
rainy	33	2	received	475	2

receiving	42	0	relief	7	3
recent	112	2	relieve	28	3
recently	96	0	remain	399	4
reception	24	2	remainder	3	3
recess	12	5	remark	20	3
recipe	0	4	remedy	23	3
recite	9	5	remember	273	5
recognize	9	4	remembered	12	2
recommend	52	2	remembrance	13	2
recommendation	22	1	remind	26	1
record	130	2	remit	57	0
red	157	5	remittance	71	0
reduce	21	1	remove	16	2
reduction	22	1	renewal	26	0
refer	108	3	rent	148	5
reference	189	2	repair	54	5
referred	68	2	repeat	16	2
referring	85	1	replied	5	4
refuse	25	4	reply	379	5
refused	10	2	replying	215	1
regard	392	2	report	274	4
regarding	160	0	represent	38	2
regards	41	0	representative	74	2
register	81	1	represented	28	1
registered	30	0	republican	33	0
registration	39	0	request	163	3
regret	85	2	requested	54	0
regular	167	4	require	90	2
regularly	34	1	required	35	1
relation	38	1	requirement	27	0
relations	42	0	requirements	29	0
relative	62	4	rescue	1	3
reliable	32	1	resemble	3	3

resident	10	2	road	153	4
resort	5	5	roar	6	4
respect	45	2	roast	13	5
respectfully	281	3	rob	3	4
response	29	0	robber	3	3
responsible	23	2	robbery	1	3
responsibility	25	1	robin	0	3
rest	293	5	rock	46	5
restaurant	22	5	rod	7	3
result	130	4	rode	7	4
retreat	0	4	roll	42	4
return	490	5	rolled	2	3
returned	85	2	rolling	12	3
returning	32	0	roof	27	5
revolutionary	0	3	room	500	5
revolver	6	3	rooster	0	3
reward	1	5	root	3	5
rheumatism	28	1	rope	4	5
ribbon	22	5	rose	34	4
rice	14	3	rough	30	5
rich	49	5	round	67	5
ride	147	5	route	26	3
riding	22	4	row	23	5
rifle	7	5	rubber	13	5
right	695	5	rude	1	4
ring	76	5	rug	40	4
ringing	3	3	ruin	10	3
rinse	0	3	rule	62	5
ripe	2	4	run	251	5
rise	20	5	rung	0	3
rising	0	3	running	38	4
risk	6	3	rush	56	4
river	69	5	rushed	10	2

rushing	20	1	satisfy	46	4
			Saturday	229	3
sack	20	5	sauce	13	2
sacrifice	10	2	savage	1	4
sad	33	4	save	83	4
saddle	8	3	saver	29	0
safe	54	5	saving	70	3
safely	16	3	saw	194	4
safety	23	3	say	1821	4
said	481	3	saying	56	1
sail	21	5	says	72	1
sailed	0	3	scale	22	3
sailing	1	3	scarce	14	3
sailor	6	3	scarcely	23	2
sake	15	3	scare	33	4
salad	11	3	scatter	3	4
salary	46	4	scene	7	3
sale	87	5	scenery	10	4
salesman	25	0	schedule	34	1
salt	17	5	scholar	12	3
same	974	5	school	1206	5
sample	243	2	science	34	2
samples	36	0	scold	9	5
sand	38	4	score	24	5
sandwich	5	5	scout	47	2
sang	1	3	scrap	25	3
sanitary	35	1	scratch	3	4
Santa Claus	0	4	scratched	2	3
sat	29	4	scream	4	4
satin	14	3	screen	8	4
satisfaction	64	1	screw	3	3
satisfactory	268	2	scrub	10	4
satisfied	71	4	sea	27	5

seal	13	4	separate	94	4
search	10	5	Sept.	26	0
season	194	4	September	100	3
seat	67	4	serious	52	4
second	194	5	sermon	25	2
secret	13	3	servant	0	4
secretary	94	3	serve	103	4
section	118	4	service	362	4
secure	113	3	services	27	0
securing	35	0	session	8	3
see	2054	5	set	223	5
seed	77	5	setting	17	2
seeing	27	3	settle	71	5
seek	14	4	settled	26	2
seem	663	5	settlement	24	4
seemed	53	2	seven	135	4
seems	62	0	seventeen	11	3
seen	173	4	seventh	20	3
seize	1	3	seventy	33	2
seldom	26	4	several	262	5
select	46	2	severe	20	2
selection	37	1	sew	94	5
self	48	4	sewing	30	4
selfish	2	3	shade	38	5
sell	201	5	shadow	7	3
selling	83	2	shake	14	5
semester	39	1	shaking	0	4
send	1595	5	shall	1108	4
sending	250	2	shallow	0	3
senior	35	1	shape	61	5
sense	36	4	share	49	3
sent	476	4	shark	0	3
sentence	10	3	sharp	9	4

she	2814	4	show	367	5
shed	12	5	showed	16	3
sheep	13	5	shower	17	4
sheet	73	4	shown	52	3
shelf	3	5	shut	21	5
shell	9	5	sick	311	5
shelter	0	3	sickness	28	2
shelves	0	3	side	205	5
shepherd	0	3	sidewalk	14	4
sheriff	0	3	sight	61	5
shine	18	5	sign	104	5
shining	7	4	signal	0	3
ship	95	4	signature	26	2
shipment	178	1	signed	63	2
shipped	87	3	silk	73	5
shipping	52	3	silly	21	2
shirt	38	4	silver	32	5
shock	19	3	similar	35	1
shoe	72	5	simple	29	5
shook	0	4	simply	78	2
shoot	10	5	since	618	5
shooting	2	3	sincerely	383	3
shop	58	4	sing	58	4
shopping	16	2	singing	12	2
shore	9	4	single	44	4
short	268	5	sink	18	5
shot	15	4	sir	941	3
should	1044	4	sirs	55	0
shoulder	21	5	sister	297	5
shout	3	4	sit	142	4
shouted	0	3	sitting	34	4
shove	4	3	situation	48	3
shovel	1	5	six	291	4

sixteen	15	3	smell	8	4
sixth	17	3	smile	6	5
sixty	61	4	smoke	42	5
size	163	5	smoking	0	4
skate	11	5	smooth	15	5
skated	1	3	snake	2	5
skating	14	4	snap	15	4
skeleton	0	3	sneak	0	4
skin	12	5	snow	128	4
skirt	85	2	snowball	0	3
sky	4	4	snowed	18	3
slap	3	4	snowing	13	3
slave	2	4	so	4616	3
sled	0	5	soak	5	4
sleep	166	5	soap	41	3
sleepy	23	3	social	63	2
sleet	10	2	society	51	5
sleeve	26	5	sock	21	1
sleigh	8	4	soda	3	3
slept	14	4	soft	32	3
slice	7	3	soil	121	5
slid	1	4	sold	136	4
slide	31	5	soldier	33	5
sliding	0	3	solid	9	3
slight	22	1	some	2573	5
slip	51	5	somebody	15	3
slipped	2	4	someone	28	2
slipper	18	4	something	393	4
slippery	11	4	sometime	169	4
slow	47	4	somewhat	54	0
small	295	5	somewhere	29	2
smaller	15	2	son	71	5
smart	27	3	song	40	5

soon	878	4	spoil	20	5
sooner	81	2	spoke	30	4
sore	66	5	spool	0	3
sorrow	14	3	spoon	10	3
sorry	296	5	sport	28	4
sort	89	5	spot	25	4
soul	23	3	spray	30	1
sound	68	4	spread	32	4
soup	13	4	spring	218	5
source	14	2	sprinkle	12	3
south	121	4	sprinkling	0	3
southern	19	4	spy	2	3
sow	0	3	square	72	4
space	31	2	squash	0	3
spade	0	3	squeeze	11	2
spare	44	4	squirrel	0	5
sparrow	0	3	stable	5	3
speak	148	4	stack	5	3
speaker	51	1	stage	19	4
speaking	6	4	stair	83	2
spear	0	3	stairs	5	3
special	185	4	stake	2	3
speech	15	2	stalk	2	3
speed	12	3	stamp	79	5
spell	70	4	stamped	27	1
spelling	12	3	stand	189	4
spend	179	4	standard	53	0
spending	15	2	standing	31	1
spent	73	3	star	18	5
spin	0	4	starch	0	3
spirit	41	4	start	293	5
splendid	80	5	started	146	2
split	7	4	starting	31	3

starve	8	3	stove	55	5
state	622	5	straight	46	5
stated	43	0	strange	34	5
statement	180	1	strap	5	3
station	70	5	straw	15	5
stationery	27	2	strawberry	1	3
statue	1	3	stream	0	4
stay	409	4	street	316	5
stayed	72	4	strength	34	4
staying	23	2	stretch	4	3
steady	22	4	strike	42	4
steal	5	5	string	10	4
steam	13	4	strong	60	5
steel	18	3	struck	11	4
steep	4	4	struggle	13	4
steer	0	3	stuck	5	3
step	60	4	student	101	2
stepped	0	3	studied	17	3
stick	34	5	studies	27	3
stiff	12	4	study	144	5
still	341	5	studying	30	4
stock	226	3	stuff	68	5
stole	0	4	stump	3	3
stomach	41	4	stunt	22	1
stone	40	4	style	85	3
stood	22	3	subject	208	4
stooped	0	3	submit	40	0
stop	241	5	subscription	94	1
stopped	37	4	substitute	20	1
store	148	5	succeed	32	5
stories	14	3	success	140	3
storm	58	4	successful	79	4
story	50	5	such	797	5

sudden	12	4	swam	0	4
suffer	30	2	swamp	0	4
sufficient	60	2	sweat	17	2
sugar	22	5	sweater	14	3
suggest	143	5	sweep	26	4
suggested	22	1	sweet	88	5
suggestion	33	3	swell	40	0
suit	177	5	swept	0	4
suitable	64	2	swift	0	4
sum	29	3	swim	9	4
summer	297	5	swimming	6	4
sun	63	5	swing	17	5
Sunday	237	3	swinging	1	3
sunk	2	4	switch	7	3
sunny	5	3	sword	1	3
sunshine	16	4	sympathy	26	2
superintendent	67	2	system	66	3
supervisor	11	2			
supper	162	5	table	117	5
supplied	22	1	tablet	7	4
supplies	37	3	tackle	4	3
supply	138	5	tact	3	3
support	62	4	tag	3	4
suppose	422	5	tail	8	5
supposed	32	2	take	1563	5
sure	667	5	taken	188	1
surely	142	3	taking	143	4
surface	16	3	tale	5	3
surprise	103	5	talk	334	5
surprised	57	2	talked	42	3
surrender	3	4	talking	51	3
surround	6	3	tall	6	5
swallow	4	3	tame	0	3

tan	23	2	text	34	2
tangle	1	3	than	1029	4
tank	17	3	thank	730	4
tap	0	3	thanked	0	3
tar	0	3	thankful	31	2
target	1	3	thanking	408	1
taste	34	5	thanks	43	0
taught	26	4	thanksgiving	53	0
tax	27	1	Thanksgiving	0	3
tea	42	4	that	10376	4
teach	118	5	that's	27	0
teacher	300	3	the	29399	4
teachers	32	0	theater	26	2
teaching	87	2	theatre	0	3
team	68	5	their	1031	4
tear	22	4	them	2009	4
tease	4	4	themselves	41	5
teeth	22	4	then	1279	4
telegram	29	3	there	2546	5
telegraph	4	4	therefore	172	4
telephone	51	4	these	766	4
tell	1290	5	they	2727	4
telling	34	2	thick	17	5
temperature	5	3	thief	2	3
ten	262	3	thimble	0	3
tend	15	3	thin	35	5
tennis	4	3	thing	987	5
tent	26	3	things	93	0
tenth	14	2	think	2264	5
term	118	3	thinking	76	2
terrible	102	5	third	114	4
territory	68	3	thirsty	3	3
test	69	4	thirteen	17	4

thirty	96	4	tip	14	4
this	5706	3	tire	158	3
thorough	25	4	tired	82	2
thoroughly	51	0	title	39	3
those	296	4	to	26052	4
though	355	4	tobacco	24	4
thought	352	3	to-day	533	4
thousand	84	3	together	245	5
thread	18	5	told	285	4
threat	1	3	tomatoes	6	3
three	688	4	to-morrow	312	4
threw	5	4	ton	49	0
throat	35	4	tongue	9	3
through	515	5	to-night	154	2
throughout	31	1	too	1063	4
throw	41	5	took	196	4
throwing	1	3	tooth	23	3
thunder	6	5	top	76	5
Thursday	120	3	topic	10	2
thus	40	2	tore	12	4
ticket	89	5	torn	1	4
tickled	27	1	toss	0	3
tie	27	5	total	39	2
tied	2	4	touch	50	5
tiger	0	5	toward	47	5
tight	27	4	towel	23	3
tile	23	1	town	495	5
till	232	4	toy	14	5
time	3548	5	track	38	5
times	64	1	trade	244	4
timid	2	3	train	369	5
tin	2	5	training	30	3
tiny	12	2	tramp	2	4

transfer	21	4	tub	5	3
trap	1	4	tube	0	3
travel	33	5	tuck	5	3
traveled	0	3	Tuesday	113	3
traveler	4	3	tumble	0	4
traveling	10	3	tune	3	4
treasure	9	3	tunnel	1	3
treat	46	4	turkey	22	5
treatment	50	0	turn	138	5
tree	115	5	turned	22	2
tremble	1	3	turnip	0	4
trial	49	1	turtle	0	4
tribe	2	4	twelfth	3	3
trick	4	4	twelve	73	4
tried	42	4	twentieth	1	4
trim	14	4	twenty	186	4
trimmed	5	4	twenty-five	14	2
trimming	3	3	twice	77	3
trip	233	5	twilight	0	3
tripped	0	3	twin	11	4
troop	0	3	two	1231	4
trouble	269	5	type	30	0
trousers	2	4			
trout	0	3	ugly	8	3
truck	5	3	ult.	47	0
true	87	5	umbrella	6	4
truly	1927	2	umpire	0	3
trunk	54	5	unable	124	2
trust	195	2	uncle	173	5
trusting	102	0	under	505	5
truth	31	3	understand	196	3
try	508	5	understanding	32	1
trying	91	4	understood	20	2

uniform	12	2	vegetable	37	2
union	69	4	velvet	23	3
united	54	2	very	4200	5
university	110	2	vessel	4	5
unless	164	5	vicinity	26	1
unnecessary	25	0	victory	11	4
until	685	5	view	86	3
unusual	24	1	village	6	5
up	2338	3	vine	1	4
upon	400	5	violet	0	5
upper	6	3	violin	20	5
upset	4	3	visit	295	5
urge	30	1	visited	27	2
us	2488	2	visiting	35	3
use	797	5	visitor	8	3
used	178	3	voice	31	5
useful	45	4	volume	74	2
useless	12	2	volunteer	14	2
using	64	3	vote	78	3
usual	164	4	voyage	0	3
usually	54	3			
			wade	1	3
vacant	17	2	wage	25	1
vacation	135	5	wagon	46	5
valentine	2	3	waist	94	4
valley	35	4	wait	241	4
valuable	43	4	waiting	75	3
value	173	4	wake	31	5
valued	69	0	walk	180	5
variety	48	2	walked	16	3
various	69	3	walking	12	3
vary	38	0	wall	52	5
vase	1	5	walnut	41	4

want	1432	5	weigh	46	3
wanted	171	2	weight	40	3
wanting	23	1	welcome	90	5
wants	25	1	well	2060	5
war	202	4	we'll	39	0
ware	0	3	went	551	4
warm	140	5	were	1062	4
was	2873	4	west	159	3
wash	155	5	western	29	3
washed	27	3	wet	55	5
washing	33	3	wharf	0	3
wasn't	83	3	what	1758	4
waste	40	4	whatever	77	3
watch	72	5	wheat	71	5
watched	14	3	wheel	39	5
watching	15	2	when	2849	5
water	244	5	whenever	49	3
wave	6	5	where	597	4
way	808	4	wherever	10	2
we	12207	3	whether	289	5
weak	44	5	which	2660	5
wealthy	3	3	while	615	5
wear	195	5	whip	9	5
weary	8	3	whipping	0	3
weather	286	4	whisper	4	3
weave	2	3	whistle	6	5
wed	23	1	white	193	5
wedding	18	2	who	980	4
Wednesday	92	3	whole	165	5
weed	4	5	whom	118	3
week	1520	5	whose	46	4
weekly	28	1	why	333	4
weeks	71	0	wide	37	5

wife	115	5	wonderful	150	3
wild	40	5	wondering	34	2
will	8867	5	won't	175	3
willing	86	2	wood	54	5
willow	4	3	wool	20	2
win	107	5	word	192	5
wind	65	4	wore	4	4
window	86	5	work	1352	5
windy	10	3	worked	52	3
wine	0	3	working	125	3
wing	3	4	world	153	4
winning	2	3	worm	11	4
winter	266	5	worn	3	4
wipe	6	4	worried	27	4
wiped	0	3	worry	94	5
wire	46	5	worse	37	4
wise	33	3	worst	18	3
wish	1031	5	worth	156	4
wished	74	3	would	2168	4
wishes	213	1	wouldn't	80	4
wishing	52	2	wound	3	5
witch	9	4	wrap	7	3
with	5594	5	wrapped	1	3
wither	1	4	wreck	6	4
within	74	3	write	1862	5
without	380	5	writer	174	0
witness	0	3	writing	215	4
woke	1	3	written	172	4
wolf	0	3	wrong	54	4
woman	132	5	wrote	194	4
women	57	4			
won	34	4	Xmas.	63	1
wonder	199	5			

yard	108	5
yarn	3	3
year	1472	5
yearly	31	0
years	85	0
yell	8	3
yellow	33	5
yes	192	5
yesterday	630	4
yet	619	5
yield	6	3
you	17914	4
you'd	29	0
you'll	30	0
young	244	5
your	10013	5
yours	1460	1
yourself	166	5
zero	17	3
zone	17	2

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